

1.2/242



YEAR BOOK OF THE HEATHER SOCIETY



1989



Digitized by the Internet Archive
in 2014



THE HEATHER SOCIETY

Affiliated Societies:

Nederlandse Heidervereniging 'Ericultura'

Gesellschaft der Heidefreunde

North American Heather Society

President:

Mr. C. D. BRICKELL, V.M.H.

Vice-Presidents:

Mrs. C. I. MacLEOD **Mr. D. McCLINTOCK, T.D., F.L.S.**
Mrs. D. METHENY

Chairman:

Maj.-Gen. P. G. TURPIN, C.B., O.B.E.

Secretary:

Mrs. P. B. LEE

Treasurer:

Mr. D. B. OLIVER

Council:

Mr. D. M. EDGE	Mr. D. J. T. MAYNE
Mrs. D. EVERETT	Mr. H. L. NICHOLSON, M.B.E.
Mr. A. HALL	Mr. D. H. E. ROPE
Mr. A. W. JONES	Mr. D. J. SMALL
Mrs. D. H. JONES, J.P.	Mr. A. J. STOW
Mr. P. L. JOYNER	Mr. G. P. VICKERS

Administrator:

Mrs. A. SMALL, Denbeigh, All Saints Road, Creeting St. Mary,
Ipswich, Suffolk IP6 8PJ

Editors:

Bulletin: **Mrs. D. EVERETT**, Greenacres Nursery, Bringsty,
Worcester WR6 5TA

Year Book: **Mr. A. W. JONES**, Otters' Court, West Camel, Somerset
BA22 7QF

Registrar:

Mr. D. McCLINTOCK, Bracken Hill, Platt, Sevenoaks, Kent,
TN15 8JH

Slide Librarian:

Mr. D. J. SMALL, Denbeigh, All Saints Road, Creeting St. Mary,
Ipswich, Suffolk IP6 8PJ.

Contents

Volume 3 No. 7

ISSN 0440 - 5757

EDITORIAL	3
FROM THE CHAIRMAN - <i>Maj-Gen. P. G. Turpin</i>	4
ANNUAL CONFERENCE, GREGYNOG, SEPTEMBER 1988 - <i>H. M. J. Blum</i>	5
THE EFFECT OF FROST - WINTER 1984 - 1985 - ON MY HEATHER COLLECTION - <i>Comte Bernard de la Rocheſoucauld</i>	11
HEATH GROWING IN JAPAN - <i>Satoshi Miwa</i>	13
A NOTE ON CULTIVAR NAMES IN FANCY FORM - <i>David McClintock</i>	16
PESTS AND DISEASES OF HEATHERS - <i>Audrey M. Justice</i>	17
PROPAGATION - BACK TO BASICS - <i>Arnold Stow</i>	29
THE ERICA SCOPARIA IN MADIERA - <i>David McClintock</i>	32
ERICA MANIPULIFLORA SALISB. IN SOUTHERN YUGOSLAVIA, OCTOBER 1988 - <i>A. W. Jones</i>	36
HEATHERS AND HEATHLANDS - <i>David Small</i>	44
THE "VIRIDIFLORA" VARIANTS OF CORNISH HEATH - <i>David McClintock</i>	51
HEATHER RECORDS - <i>David McClintock</i>	54
GEOGRAPHICAL NAMES FOR SOUTHERN AFRICAN ERICAS - <i>David McClintock</i>	60
PERSONAL AND GEOGRAPHICAL NAMES FOR HARDY HEATHERS - 7th SUPPLEMENT - <i>David McClintock</i>	63
CULTIVARS REGISTERED DURING 1983 - <i>The Registrar</i>	65
NEW ACQUISITIONS - <i>J. Platt</i>	66
RECENT WRITINGS ON HEATHERS, 1988.....	70
NURSERYMEN MEMBERS	77
LOCAL ORGANISERS	81
COMMITTEE MEMBERS.....	83

Editorial

Writing these notes unusually late in the year has allowed me to reflect on the effects of a hot dry summer in the south of the country. My records show that the total rainfall here for May and June was exactly the same as for those two months in 1976. At 30mm it was about 28% of the average for that period. The July figure was close to the average, but most of it fell during 24 hours on the 7th and 8th of the month and was therefore of less value than if it had been spread more evenly. Thereafter the dry weather continued. The mean temperatures throughout the summer were very similar to those of 1976.

There were hose pipe bans. The gardening articles in the newspapers told us how to conserve the little water that was available, and, somewhat belatedly, which plants were best able to withstand the drought conditions.

On trips through the New Forest I felt that the heather was not blooming as profusely as in other years. Perhaps it had been grazed more heavily as the grass was scarce. In the garden there was a paucity of good cutting material. The heathers will surely have suffered in many gardens, as they did in 1976.

It seems that the species which are most widely planted here do not relish high temperatures and drought, but what of the Mediterranean species that regularly encounter these conditions in the wild? The brief descriptions of their habitats in *Flora Europaea* indicate that *Erica arborea* and *E. terminalis* favour damp, shady places, though the former is usually found in drier evergreen scrub, *E. sicula* on cliffs, and *E. manipuliflora* and *E. multiflora* grow on dry rocky hillsides. It is interesting to note that all these species can be found on the more calcareous soils. Do they possess powerful roots which can penetrate below rocks to take advantage of the moisture they may find there? It is certain that old specimens of *E. arborea* produce large roots which are highly prized for the manufacture of "briar" pipes.

THE HEATHER SOCIETY

Few of us grow *E. multiflora* or *E. sicula* in our gardens. Have *E. arborea*, *E. manipuliflora* and *E. terminalis* fared better than other species during the drought of 1989? I know that *E. terminalis* always produces a better show here in hot dry summers than in damp wet ones.

From the Chairman

*Maj.-Gen. P. G. Turpin, C.B., O.B.E.
West Clandon, Surrey.*

Membership of the Heather Society covers a wide field of interests. Some of our members are botanists, with a special interest in taxonomy and the structural differences of various species and hybrids. They are happiest, when they are looking at their heathers through a microscope or examining the differences between pressed specimens in a herbarium. Others are enthusiastic collectors of newly-named cultivars, or like searching in the wild for something new or unusual. Nurserymen members are always on the look-out for plants which are likely to have a commercial future.

But most of us just like growing heathers in our gardens, regardless of technicalities and without worrying too much about the complications of nomenclature.

Whatever our particular interest we are all drawn together by a common love of heathers, as was amply demonstrated at our recent Conference at Gregynog, where members from four Continents, from widely differing backgrounds, spent a happy weekend together, talking about heathers and sharing their experiences of growing and cherishing this delightful group of plants.

There is a place in our Society for anyone who can appreciate the beauty of heather either as a wild flower or as a garden plant.

Annual Conference, Gregynog, September 1988

H. M. J. Blum, Steenwijkerwold, Holland.

The long drive into the sun with David McClintock from Kent to Gregynog, a residential education centre of the University of Wales at Tregynon, took seven hours. We arrived at 7 p.m., too late for the reception and tea; dinner was just ready.

After a good meal and settling in our rooms there was time for getting acquainted. Bert Jones nominated me to report on this Jubilee Conference of the Soceity, 25 years after its foundation.

78 members were present, 69 of them resident in Gregynog itself. Eight countries were represented (Australia, England, Holland, Ireland, Norway, Scotland, Sweden, U.S.A. and Wales).

After a short welcome by Maj.-Gen. P. G. Turpin, the Conference started with a talk by Dr. Glyn Hughes, the Warden of Gregynog, who told us about the house and its interesting history.

At 10 p.m. there was time for more informal contact, which I was not alone in enjoying. A very good start.

Saturday morning started with a report on "The Twelve Heathers Introduced in the Past 25 Years Which Members Like Best". David McClintock had asked all members (*Bulletin*, Summer 1988) to send him a list of their own 12 favourites.

Before Mr. McClintock gave the results he mentioned that Gen. Turpin had now been the invaluable Chairman of

THE HEATHER SOCIETY

the Heather Society for 10 years. This reminder was greeted with grateful applause.

It was a great pity that only 27 of the almost 1500 members had sent in their lists of favourites. Those who had, had together chosen 100 different cultivars, some of which were much older than 25 years (e.g. *Erica carnea* 'King George'). On two lists there were no cultivars of *Calluna vulgaris*, and on three none of *E. carnea*.

Calluna vulgaris 'Kinlochruel' was the absolute winner. In second place came *E. carnea* 'Myretoun Ruby', which is maybe just a little older than 25 years, and *E. arborea* 'Albert's Gold' was chosen in third place. With fewer votes followed *E. x stuartii* 'Irish Lemon', *E. erigena* 'Irish Dusk' and 'Golden Lady', *E. vagans* 'Valerie Proudley', *E. carnea* 'Foxhollow', 'R. B. Cooke' and 'Westwood Yellow', *E. arborea* 'Estrella Gold' and *E. cinerea* 'Stephen Davis'. *Calluna vulgaris* 'Silver Knight' had got the same number of votes.

Strikingly, many yellow-leaved cultivars seemed to be favourites. Some of the cultivars which had received fewer than five votes were also discussed. Nevertheless, it was sad that so few members had sent in lists, for the idea and the presentation were very good.

After coffee Mrs. Diane Jones gave a fine talk entitled "Heather Garden Design - A Practical Approach". She told us that she had had no formal training in design, she would only give her personal views on it.

The starting point of a design is to find answers to such questions as what plants and trees are already growing on the site, what is the prevailing wind direction and is protection needed? Some of her other advice was that heathers are sun-, light- and air-loving plants so, never plant them under trees or in the shade of houses, hedges, walls, fences or tall plants. Heathers are often planted in the wrong places, and

it is not fair then to expect good results. If people want heathers in their garden, and there is no other suitable place than in the centre of the lawn, then plant them there. Making a heather garden on slopes and terraces is more effective than on flat ground. Terrace-effects may be made with walls of stone, brick or peat blocks. On flat ground a pleasing effect may be obtained by using plants of different heights.

Straight lines are not found in natural landscapes, so make paths and edges curved. Plant cultivars in groups to make a good colour effect, contrasting foliage and flower colour.

Throughout her talk Mrs. Jones showed us slides of different gardens, and pointed out what was of special interest in each of them.

After lunch two coaches drove us to Craven Arms where we visited "Oldfield Garden" of Mr. and Mrs. Paul Housden. It was a very fine garden with perennials, rock plants and fruit trees.

The Ridgeway Heather Nursery of Mrs. B. Evans was the next point of our programme. A good heather planting in front of the house contained *E. carnea* 'Spring Day' which was completely new to us. There was a small nursery near the house with about 100 different heathers cultivars, grown in pots. It was surprising to me, and I saw it almost everywhere I went in England, to find the name *E. x darleyensis* 'Silver Beads' used instead of the correct name 'Silberschmelze'. I do not understand why this should be so, after so many years of work by the Heather Society.

A visit to a heather nursery by heather people means that some plants must be bought. I saw several members with boxes full of plants. The same thing happens in Holland when our Society organizes an excursion to a nursery. We simply have to bring some new plants home with us.

THE HEATHER SOCIETY

After several pleasant hours in fine weather, which could not have been better during the whole Conference, the coaches brought us back to Gregynog.

In the evening Mr. A. J. Hancock, head gardener of Powis Castle, gave us an illustrated talk on what we should see there next day.

The Annual General Meeting was held on Sunday morning. In his inaugural speech Maj.-Gen. Turpin referred to some of the articles in the 1988 *Year Book* which had already given a survey of the Society's achievements during its first 25 years. He was saddened by the death of Dr. Violet Gray, the widow of Dr. Ronald Gray. He mentioned that there was now some progress with the Reference Collection at Wisley, and that planting should begin in the autumn. The British Heather Growers Association will be selecting the best stocks of many popular cultivars in trials at several locations. Finally he thanked those who had done so much work for the Society.

The election of officers and members of Council gave no problems, and all were re-elected.

After reports by the Secretary Mrs. P. Lee, and the Treasurer Mr. D. B. Oliver, the meeting finished promptly.

After coffee Dr. John Griffiths gave his talk on "Further Progress on Experiments in Heather Hybridisation". This was to be the high point of the Conference for me. I was especially interested because I have followed, as closely as possible, the activities of Dr. Griffiths, D. Wilson, and particularly Kurt Kramer in Germany. Again I can refer to the last issue of the *Year Book* in which Dr. Griffiths had written about his work, so I will only dip into the subject here.

He started by telling us that if all 18 European *Erica* species were crossed with each other there would be 306 possibilities. Some species do not look promising for hybridisation because, for instance, their range of flower colour is limited.

He showed us some fine slides of his work, and the remarkable plants that resulted from his experiments. A cross between *E. tetralix* 'Alba Mollis' and *E. vagans* 'Valerie Proudley' brought him a good *E. x williamsii* with yellow tips to the new growth. *E. tetralix* 'Bartinny' x *E. vagans* 'Valerie Proudley' produced a minute hybrid with yellow foliage. This wonderful plant which already has a name, but ... not yet for publication. Dr. Griffiths attributes the fact that so few examples of *E. x williamsii* have been found in the wild to many seedlings being weak and slow growing. They are therefore usually smothered by stronger plants before they come to maturity.

Crosses between *E. tetralix* 'Con Underwood', and both a white-flowered *E. ciliaris* and 'Corfe Castle' have produced some promising new *E. x watsonii*. One of the plants with 'Corfe Castle' as a parent has been judged to be worth a provisional name.

Some progress in producing crosses between *E. mackiana* and *E. tetralix*, and so obtaining new *E. x stuartii* plants, seems possible since Spanish plants of the former species are fertile, unlike those in Ireland.

E. manipuliflora x *E. vagans* 'Valerie Proudley' produced a fine vigorous plant with yellow foliage and pink flowers. He has named this 'Valerie Griffiths' after his wife.

Hybridising heathers has a great future in my opinion. It will bring us many good new plants, especially when European and Cape Heaths are crossed. The first steps have

THE HEATHER SOCIETY

already been taken in this direction by Kurt Kramer. At the time of writing this report I have seen the first buds on his plants of *E. arborea* x *E. carnea*.

After the usual group photograph and lunch, two coaches brought us to Powis Castle near Welshpool to visit the world-famous hanging terraces and gardens. Colourful perennials in fine settings, enormous yew hedges and the scope of the place made this an unforgettable afternoon.

An excellent Celebration Dinner awaited us at Gregynog, and after that an Open Forum. Bert Jones and David McClintock described a journey they made with David Small to Holland and Germany (see *Bulletin*, Summer 1988, p6). Bert showed us very fine pictures of Kurt Kramer's *E. carnea* crosses, of the trial ground at the Horticultural Research Station at Bad Zwischenahn, of the former heather garden at Steenwijkerwold where I was the gardener until 1985, of van Hoef's heather nursery at Barneveld and the new Research Station at Boskoop.

Mrs. Brita Johansson of Vargön, Sweden gave a short but very interesting account with slides of her special *Calluna* finds from the wild near her home. One abnormality was a plant with wine-red sepal-like "leaves" at the tip of each shoot. This produces a pleasant effect on a plant which has not yet flowered. She also showed a cutting of a micro-plant, the leaves of which can only be seen through a lens. She told us about her yellow-leaved *E. tetralix* 'Swedish Yellow', *Calluna* 'Kerstin', and the only known double-flowered find from her country 'Brita Elisabeth'.

The programme ended, and some of us met for a drink and to continue the discussion in the bar.

The next morning after breakfast it was time for farewells and travelling home. It had been a well-organised Conference, with an excellent atmosphere between the

members and very good weather. For your reporter, who returned home via the Warner's nursery, it had been an enjoyable experience, as it had for all who attended, thanks to the organisers.

The Effect of Frost — Winter 1984 - 1985 - on my Heather Collection

*Comte Bernard de la Rochefoucauld, Ingrannes,
Nr. Orleans, France.*

On the 10th of January 1985, after a mild autumn and warm Christmas, the temperature suddenly went down. In four days it reached -27°C , and stayed there for two weeks. It was followed in February by -16°C for one week; then by four days with -12°C in March. And to end it all by -8°C on the 24th of April.

The lawns were still being mowed at Christmas, which is exceptional. The plants, especially evergreens, were still in active growth. *Erica lusitanica* was flowering.

After this Irish climate, suddenly, in four days, we were in Siberia. Plants were brutally seized by this heavy and unusual cold. No snow was in sight; the soil was bare and damp.

Before mid-January the river Loire was in ice; two bridges were destroyed by ice floes before the whole river was frozen over. Green houses ceased to provide protection. No heating equipment was designed to resist such weather.

After two months our garden was a wreck, and we had no idea what to do. An old English friend I called up for advice

THE HEATHER SOCIETY

answered "Put your shears and saws in the cellar and hide the key, leave the place and come back in June". In June that year the visit of the IDS (International Dendrology Society) was planned. So we just had to put the place in order.

The damage to our heather collection was as follows:
Calluna. No damage. The drought in the summer of 1976 had damaged them heavily.

Erica ciliaris. All destroyed. No aftergrowth.

E. cinerea. All destroyed, except for the young plants one or two years old and the cuttings. No aftergrowth. *E. cinerea* grows wild around here. This illustrates the very unusual climatic conditions (active growth in a mild winter, no snow protection).

E. erigena. All destroyed. Hardly any aftergrowth.

E. mackaiana. All destroyed. No aftergrowth.

E. tetralix. Very nearly all destroyed, except for young plants one or two years old. *E. tetralix*. grows in the wild here.

E. vagans. All destroyed. No aftergrowth. Again, young plants survived. *E. vagans* grows in the wild about 50 miles south of here.

E. x darleyensis. All destroyed. No aftergrowth except young plants.

E. x stuartii. Good resistance.

E. x watsonii. Destroyed, except young plants.

E. x williamsii. Destroyed, except young plants.

E. scoparia. Destroyed, but vigorous aftergrowth. Grows in the wild here.

E. umbellata. Totally destroyed.

E. australis. Totally destroyed.

E. arborea. (Southern France). Destroyed.

E. arborea 'Alpina' (Spain). Destroyed, but vigorous aftergrowth.

E. lusitanica. Totally destroyed.

E. terminalis. Good resistance.

E. x veitchii. Destroyed.

Daboecia. Excellent resistance. No destruction, only cut-back. They flowered in June '86.

Bruckenthalia. No problems.

Here now is an idea of other plant damage.

Cistus. Destroyed, except young plants.

Buddleia. Destroyed.

Cassinia. Destroyed.

Ceanothus. Destroyed, except 'Gloire de Versailles' and 'Marie Simon'.

Ceratostigma. Destroyed.

Choisya. Destroyed.

Escallonia. Destroyed.

Hebe. Destroyed.

Magnolia. Very good resistance, except for old (over three Year) plants of *grandiflora* and for the Himalayan 'Campbelli'. We grow 160 species and hybrids. The test was most interesting.

Nothofagus. All gone except *antarctica*.

Vitex. Gone.

Cupressus. Gone.

Phlomis. Destroyed, but restarted from the roots.

Heath Growing in Japan

Satoshi Miwa, Hamamatsu, Japan.

As a name of plant, *Erica* has been very well known in Japan, though its whole image is only little appreciated. Since introduced about 75 years ago, *E. canaliculata* has been practically the only heath for most Japanese horticulturalists. Of course, many other Cape or European heaths and heathers have been introduced to Japan, almost none of them were seen in florist shops or in gardens. Only in the past ten years or so, a few species of Cape heaths are becoming popular as pot flowers.

E. canaliculata is widely grown in the milder parts along the south-western Pacific coast, mainly as a cut flower for winter market and also in some quantity as a pot flower.

THE HEATHER SOCIETY

Shiro Uruma, a pioneer heath grower in Numazu, selected a darker coloured sport of *E. canaliculata* about 1935. It has been a general opinion that the plant most grown nowadays is this, named 'Red Queen' but I have never been sure which plant is this and which the original.

A hybrid Cape heath bearing long tubular flowers named 'Christmas Parade' was introduced to the market about 1975. It brings about another confusion. The plant introduced under that name has rose-red flowers which bloom at Christmas time. A few years later, a clearly different plant bearing rose flowers with white petal tips came out under the same name of 'Christmas Parade'. As the latter is more robust and easier to grow, it has taken over the name 'Christmas Parade' in the trade in recent years. The former is rarely seen at present.

I suppose these two are selected clones of *E. x hyemalis* and 'Christmas Parade', used in Japan, is not the correct name. No information has been found on when, how and who introduced these and what the correct cultivar names are. So far as I have observed, two more similar plants have been marketed under this same name.

Any way, *Erica* 'Christmas Parade' is one of our popular pot flowers these days in the winter season.

E. gracilis, very well known in continental Europe, is only grown to a limited extent in Japan as it tends to bloom with two dull flowering peaks in winter and also in summer. It is therefore not fully floriferous at either season. In addition, it is less heat tolerant and is apt to suffer in summer..

For about five years from 1983 I have grown more than 50 species of Cape heaths to see if some are suitable for the Japanese market as pot flowers. Ten or more species were selected and propagating material distributed to keen

nurserymen for trials. Some of them have been successfully introduced to the market by these growers.

E. sparsa (syn.*E. floribunda*) was introduced first and given a favourable reception. This plant is fully covered with tiny lilac pink bells in winter and forms an excellent pot flower. Moreover, it is a robust grower and now gradually replacing *E. canaliculata*.

E. formosa bears plenty of white bells making a good contrast with its dark green foliage. *E. blandfordia* draws attention to its very showy yellow bells. *E. hirtiflora* has numerous small pink flowers in early spring and *E. bauera*, Bridal Heath, carries pink or white inflated tubular flowers in clusters mainly in spring. They are all establishing their reputation in the market.

These successes in introduction of new *Ericas* owes every much to the efforts of Masato Shiota, a keen pot flower grower in Hamamatsu.

Regarding European heaths and heathers, I see little possibility to use them for garden plants in most parts of Japan in the same manner as they are generally used in Western countries. Although most European heaths and heathers are of course hardy enough against our winter temperatures, the dry cold wind often severerely damages them without protection. Additionally, our tropical summer climate causes die back of branches. Therefore, it is hard to keep these plants in good condition for years. In the limited areas, such as Hokkaido, the northernmost main island of Japan there will be a chance of getting satisfactory results, though this has scarcely been examined.

A few European heaths, probably *E. carnea* or *E. x darleyensis* are occasionally marketed as pot flowers but they are hardly noticed. Shiota has tried to make bonsai with some coloured foliage cultivars of *Calluna*. The

combination of three or four different foliage colours of small plants within a single pan results in an excellent winter decoration.

In Japan, *E. canaliculata* has long been the only species of heath widely grown outdoors, therefore many horticulturalists have a false fixed idea that all heaths including European species are adapted only to a mild climate.

A Note on Cultivar Names in Fancy Form

David McClintock, Platt, Kent.

Nowadays, or at least since 1959 when only fancy names, and not those in Latin form, were permissible for cultivars, we take such names for granted. But hardy heathers were a late group of plants to use names like this, and I wonder why growers were so slow to do what others had done something like a century before.

In the 18th century and into the 20th, all the names used for these heathers were in Latin form. Most of these were little more than descriptive terms, such as 'Rubra' for red flowers, 'Pallida' for pale ones and so on, with no suggestion that all the plants under such names were of the same clone. Indeed we can be sure that in at least some instances, e.g. 'Flore Pleno', they were not. Only with names derived from people or places can we feel happier that the plants we now grow may be the same as the originals. But even these Latinised personal names for hardy heathers do not date as far back as *Camellia* 'Chandleri Elegans' of about 1822 or *Rhododendron* 'Nobleanum' of 1835 or Cape Heaths, such as 'Dickinsonii' of about 1810. Our oldest seem to be 'Hammondii' which was going in 1850 followed by 'Serlei',

'Foxii' and 'Alportii', all in 1867 — and we still do not know who any of these people were, 'Serlei' even in that year spelt in three different ways.

It seems that only in 1911 did any hardy heath get a fancy name, when Backhouse of York brought out the beautiful leather-bound catalogue illustrating in colour carneas found in Italy by Richard Potter (who was he?). These were 'King George (V)', 'Queen Mary', 'Prince of Wales' and 'Queen of Spain' in honour of the coronation, as well as 'C. J. Backhouse', 'James Backhouse', 'Mrs. S. Doncaster', and Thos. Kingscote' (who was he?), 'Pink Pearl' and 'Winter Beauty', as well as 'Gracilis' and 'Praecox Rubra' in the old Latin form. 'Mr. Robert' was in print in 1916, and named by W. J. Bean; and in 1921 D. F. Maxwell was following suit with 'Frances' and 'Ruby's Variety', to be succeeded in 1925 by many more, notably 'Mrs. D. F. Maxwell'. 'Mrs. Dill' appeared about the same time, and very soon after 'Rose Queen' from Gauntletts.

Why were hardy heather growers so tardy in using the sorts of names that others had used for so long? — e.g. 'Cunningham's White' and other Rhododendrons by about 1850. Camellia 'Adolphe Audousson' about 1875, and Roses from much earlier — Brown's 'Superb Blush' 1815. 'Rose de Roi' 1816 and so on, Why?

Pests and Diseases of Heathers

Audrey M. Justice, The West of Scotland College, Ayr.

REASONS FOR CURRENT PEST AND DISEASE PROBLEMS

In the past, those who were concerned with producing or planting heaths and heathers would agree that pests and

THE HEATHER SOCIETY

diseases posed few problems at any stage of plant growth or development. Heathers were considered to be largely resistant to pests and diseases.

Sadly, this is no longer the case, at least as far as the commercial grower is concerned. In past years, heathers were propagated from cuttings taken from stock plants which were grown in soil outdoors. These cuttings were taken in late Summer and overwintered in cold frames before being potted or transplanted in the Spring. It took up to two years to produce saleable heathers, which were sold as rootballed, containerised or container grown plants. The plants were grown slowly, and lived up to their oft used title, "hardy heathers".

However the past decade has seen massive changes in the production methods used by commercial heather growers. The great majority of heathers are now sold through garden centres concerned purely with retailing. Such establishments, which abound in the U.K., demand a continuous supply of healthy plants in large numbers and lay down specific requirements as to appearance and quality of their stock, which the nurseryman must adhere to.

It's hardly surprising that growing methods have changed in order to meet these demands. Many growers now keep stock plants in pots and/or under polythene tunnels to promote lush, healthy growth for cuttings. Cuttings are rooted under polythene, or on mist benches in two to four weeks and are frequently being taken for nine months of the year using heated beds in the colder weather. Potted heathers are often grown on in polythene tunnels, and fertilisers are used throughout the production cycle to speed up and improve growth. A crop of cuttings can now be taken, rooted, potted, grown on and sold in one season, using modern nursery materials and methods. So where lies the problem?

Heathers are now being grown in greater numbers than ever before, mainly on fairly large, specialist nurseries. The widely fluctuating temperatures and humid environment within polythene tunnels, coupled with the fact that large numbers of heathers are often closely packed, create ideal conditions for disease development and pest attack. This is made worse by the fact that fertiliser use produces soft, lush growth which is much more prone to attack than was previously the case.

Diseases and pests are now a part of everyday life on commercial holdings, and their control is no easy matter, as heathers are extremely sensitive to many of the modern crop protection chemicals. The use of some fungicides, for example can create problems worse than those created by the disease! This article aims to describe the more common pests and diseases which occur on heathers, and the control measures which amateur heather growers can take to maintain healthy stock.

PESTS OF HEATHERS

Leatherjackets

Occasionally these are a problem with heathers in the garden, but more commonly a problem in container grown plants. The pests, which are the larvae of the crane fly, are grey-brown, are up to 5cm long and feed on the roots and stems of many plants including heathers. Most damage is done in the Spring, although it can occur at other times of year, particularly in tunnels. Affected plants look sickly and may wilt and turn brown.

Commercial growers use chemical pellets, dusts or drenches containing compounds such as diazinon, bromophos, and chlorpyrifos to control leatherjackets. Not all of the best compounds are available to amateur gardeners; however some which contain one or more of the former two chemicals plus lindane, phoxim or thiram, are.

THE HEATHER SOCIETY

These should be applied according to the manufacturer's instructions when leatherjackets cause problems. Some examples of available products include, Secto Root and Stem Insecticide Powder and Fisons Soil Pest Killer.

Sciarid flies

Also known as mushroom flies, these small, dark midge-like flies are attracted to decaying organic matter such as is present in potting compost and mulches. Most species are of no importance as pests, but the larvae of some can feed on young heather roots, particularly those of cuttings, causing significant damage. Attacks are usually worse in glasshouses or tunnels, where high temperatures favour continuous breeding.

The presence of Sciarid flies does not necessarily mean that plants will be damaged, since there are many harmless species, but if signs of attack are evident, the amateur heather grower can use insecticidal drenches or dusts containing lindane, malathion or diazinon. For example, All Purpose Garden Insecticide, (Secto Co. Ltd.) and Murphy Root Guard.

Red Spider Mite

These tiny mites, just visible to the naked eye are a yellow-green colour for most of the year and can cause significant damage to heathers in tunnels, frames and glasshouses, particularly between June and September. The mites spin cocoons and webs and feed on the foliage of heathers, (and many other horticultural species). Affected plants will appear poorly coloured, may develop brown areas and are generally of low quality.

One of the simplest ways of checking Spider Mite attacks is to spray the plants with a fine mist of water two or three times a day. The mites will not thrive in high humidity and numbers will start to drop. Red Spider Mite attacks are

frequently most severe on plants which are already under some sort of stress. For example older plants, or plants growing with insufficient light/water/fertiliser, etc. will be much more prone to attack. If good growing conditions are maintained, and the plants are kept healthy and vigorous, few problems should be encountered from this pest. If plants have become infested, further infestation in following years can be avoided if all the affected plants are removed and burnt. Hygiene is important, and all old bits of plant material, straw, canes etc. that could harbour hibernating mites should be removed from the area. Thorough washing and sterilising of glasshouses, tunnels and frames is of great benefit to reduce the number of overwintering females.

Chemical control is rarely effective when using the products available to amateur gardeners. Biological control using predatory mites is effective in some cases. Further information on the use of this technique is available from the Royal Horticultural Society.

Vine Weevil

These can cause serious problems in heathers grown under protection, but damage can also occur in heathers in the garden. The larvae, which are small white grubs with brown faces, live around the heather roots, and can eat almost all the roots before foliar damage is noticed, by which time it is of course too late for effective treatment. The adult weevil, which is 6 to 7 mm long and dark in colour, is difficult to spot, particularly as it hides during the day. The grubs are very difficult to kill once infection has occurred and only preventative measures will control this pest. Amateur gardeners will not find it easy to control Vine Weevil, as the most effective chemicals are not available to them. Insecticides containing Lindane, (e.g. Gamma B.H.C. Dust), may prove effective to a certain extent.

Heather beetle

The heather beetle rarely causes a problem in the U.K. except occasionally on moorlands and country heather gardens. The beetles and their larvae destroy the terminal buds and young leaves causing death of shoots. The larvae feed from late May onwards and are a pale green to brown shade. The young beetles appear in August to September and are around 5 to 6 mm long, olive brown in colour and have a black head.

No chemicals are available to amateur gardeners for heather beetle control. Damage may be avoided if the young shoots are trimmed off before they are attacked.

DISEASES OF HEATHERS

Root infecting fungi

Phytophthora* and *Pythium

Of all the root infecting pathogens, (i.e. disease causing organisms), *Phytophthora* is potentially the most serious. It causes widespread browning and death of plants on nurseries when present. However it is thankfully not common in this country. *Pythium* is a very common fungus, present in garden and nursery soils, composts and in ground water and water tanks. Although it grows happily on dead organic material, it is an opportunistic pathogen, i.e. it can take the opportunity to attack heathers when they are under any sort of stress, however mild. It has been shown to cause foliar browning and reduced root development in cuttings and is often implicated in browning of container grown heathers. These fungi attack the fine feeder roots of heathers and interfere with transport of water and nutrients to the above ground plant parts. Shoot tips may wilt and progressive browning of the foliage may be observed.

Both *Pythium* and *Phytophthora* produce spores in moist conditions. These are spread in ground water in compost and soil and in irrigation systems. Nurserymen can use fungicides to guard against *Phytophthora* and *Pythium*, but such chemicals are not available to private gardeners. A good plan is to accept the presence of *Pythium* in the garden, and try to ensure that it gets no opportunity to attack. If heathers are healthy, vigorous and under little or no stress, then *Pythium* will find little or no chance to move in and cause damage.

Rhizoctonia

There are many strains of this pathogen, some of which are capable of causing serious damage to heathers of all ages, both in gardens and under protection. Cuttings can be particularly badly affected and may be killed outright in a matter of days if conditions permit. Cuttings may show browning from the base upwards and in severe cases become covered in a fine web-like mycelium, (i.e. long fine threads of tissue). Older plants also become infected from the base. They turn brown at or near soil level, the bark on the lower branches becomes soft, and web-like mycelium may be seen.

Like *Pythium*, *Rhizoctonia* is a very common fungus and is present in garden soil, but it is not present, (under normal circumstances), in freshly prepared peat composts. Not all strains of *Rhizoctonia* will cause damage to heathers. Unlike *Pythium* and *Phytophthora*, *Rhizoctonia* produces no spores and spreads only by means of its mycelium. It can also be transferred from place to place on fragments of organic matter, garden implements and boot soles, etc.

The fungicide which is available (only to nurserymen), is of limited value in controlling this pathogen. Cultural measures are therefore very important. *Rhizoctonia* thrives

THE HEATHER SOCIETY

under conditions of high humidity and tends to cause more damage when plants are under stress, so every attempt must be made to optimise conditions for plant growth and make things difficult for the fungus. Avoid leaving cuttings covered in polythene for too long, and maintain plant once rooted. Space plants out, thus avoiding overcrowding and keep plants well watered and fed until planting out. Providing heathers are healthy when planted out, *Rhizoctonia* will rarely cause problems in a garden, unless conditions are unfavourable for good plant growth.

Honey fungus, *Armillaria mellea*

This highly damaging pathogen is frequently found on sites near to old trees/stumps and is capable of attacking almost all woody plants. It can cause browning and death of heaths and heathers in gardens and often produces tawny yellow toadstools in the Autumn which help to identify the problem. The fungus lives on old wood and can spread for long distances through the soil as bootlace-like strands of aggregated mycelium termed rhizomorphs. Spores produced from the toadstools can also act as a means of spread.

Treatment is very difficult. If the source of infection is known, then it should be removed and burnt as soon as possible, along with all other diseased plants. Chemical destruction of stumps is not usually effective. Once removed, no woody plants should be planted in the same spot for at least a year. If the source can't be traced, then trenches or buried vertical sheeting (at least 24" deep) can be used to protect areas from fungal attack. Phenolic emulsions can be used to control the spread of disease, but unless the source is removed, these powerful chemicals may need annual re-application.

Heather die-back, *Marasmus androsaceus*

This disease occurs mainly on moorlands and semi-wild

gardens in moorland areas. Clusters of small toadstools develop mainly on older shoots. Branches are seen to die back and whole plants may die. The fungus spreads by means of horse hair-like rhizomorphs in a similar way to honey fungus. There are no effective control measures, but controlled burning of existing heather may help to destroy some of the pathogen and promote more vigorous new growth which will be more resistant to further attack.

***Cylindrocarpon* and *Fusarium* species**

Both of these fungi are common in garden soil and were formerly thought of as being fairly harmless as far as heathers were concerned. However they have recently been isolated from the roots of diseased heathers on commercial nurseries. The reason for this is not known. It may be that modern fungicide programmes are killing large quantities of beneficial fungi along with the pathogenic types, thus leaving the weakly pathogenic fungi with a clear route to attack the heather plants. At present there is no evidence of these pathogens becoming a problem in gardens, or on non commercially produced heathers.

Foliar fungi

Botrytis cinerea

This is one of the most damaging pathogens on both amateur and commercial heather nurseries. It grows on both dead and live material and causes most damage at the propagation stage, when cuttings are being rooted in a warm, humid environment, although older plants can be severely affected if conditions are suitable for infection. Foliage can be seen to turn brown on affected areas, and it may become covered in grey-brown spore masses, (just visible with the naked eye). Cuttings can be killed and large numbers of plants rendered unsaleable.

THE HEATHER SOCIETY

Botrytis is a ubiquitous pathogen which spreads by means of tiny, light airborne spores. There is little point in trying to exclude the spores completely from glasshouses or propagation beds, as they are almost certainly there anyway!

However, good hygiene, i.e. removal of any dead, dying or unhealthy material, will help to reduce the number of spores. In addition to this, successful control depends on the manipulation of growing conditions to favour heather growth rather than fungal growth.

Commercial nurserymen use a combination of fungicidal sprays to prevent *Botrytis* infection, and amateur gardeners may also find it beneficial to drench or spray cuttings with Benlate, Boots Garden Fungicide etc. However many strains of *Botrytis* have now developed resistance to Benlate and several other fungicides.

Provided every attempt is made to reduce the temperature and humidity as soon as possible after heather cuttings have rooted, and free air movement is then allowed, *Botrytis* should present few problems for the amateur heather grower.

Botrytis may pose problems in older heathers when they are grown in very close proximity either in pots, (for example commercially produced stock plants) or in gardens. *Botrytis* normally only causes problems in gardens on susceptible cultivars when weather conditions are warm and humid. One of the best ways of getting rid of *Botrytis* on planted heathers is simply to remove the infected plants and burn them. However a thorough pruning of affected branches and/or a thinning of plants in affected beds may help to solve the problem. Fungicidal sprays or drenches may also help.

Pestalotiopsis guepini

This is another opportunistic fungus which tends to attack when heathers are not growing strongly. It causes foliage die-back, and the small fruiting bodies may

sometimes be seen on the branches. Provision of optimum growing conditions for the plants, i.e. good air circulation, plenty of light and a well balanced nutrition should greatly reduce the chances of this disease causing a problem. fungicides such as Bordeaux mixture and Benlate, which may help to control *Pestalotiopsis*, are rarely necessary unless heathers are being commercially produced on a large scale.

Mildew — *Oidium ericinum*

An uncommon pathogen which grows on the leaves and stems and gives them a white powdery appearance. The leaves may turn brown and fall off from the base of the branches upwards. Fungicides such as Tumbleblite, Nimrod-T and Fungus Fighter may help to control this disease, but they are rarely necessary. Mildew which is present on plants grown under protection will frequently disappear as soon as the heathers are planted out.

Heather Rust - *Uredo ericae*

Heather rust is identified by its orange yellow, dusty spores which are seen in clumps on the leaves. It can cause premature leaf fall and a general loss in condition. Rust is not common on heaths and heathers, but if it does occur it is not easily treated. Fungicides such as Tumbleblite, Dithane and Bordeaux mixture may help if the disease is caught early enough.

Conclusions

This article is not intended to strike fear into the hearts of amateur heather growers! As previously stated, many of the disease problems which commercial growers are currently facing have arisen as a result of changes in growing materials and methods, many of which now favour disease development. The situation is usually very different on small amateur heather nurseries.

THE HEATHER SOCIETY

Attention to the following points will greatly reduce any potential pest and disease problems.

1. When propagating heathers from cuttings, use only material from vigorous, healthy stock plants. Cuttings from old, sickly or diseased plants will only produce young plants of a similar quality.
2. Strike cuttings into an open compost such as peat and perlite or peat and composted pine bark, and aim to allow good air circulation around the cutting tops, even whilst maintaining a high humidity during rooting.
3. Use only minimal fertilisers whilst growing plants on and allow plants to grow slowly, as they would in nature, and with plenty of light and space, thus maintaining foliage in a firm condition.
4. Remove and burn any diseased or pest-infested plants. They only serve as a reservoir for infection.
5. Plant heathers in suitable soils or incorporate plenty of peat. Plants stressed through trying to grow in unsuitable conditions will always be more susceptible to pest and disease attack.
6. In spite of disease problems, recent improvements in nursery management mean that the quality of heathers leaving commercial holdings is frequently superb. However, the quality of heathers for sale in garden centres is still very variable.

Great care must be taken to ensure that only the very best is bought, and that no pests or diseases are brought into the garden unnecessarily. Take care to allow plants adequate time to harden off before planting, as many heathers have been grown on in tunnels and will have soft, lush growth.

7. Use fungicides only as a last resort. They frequently cause harm to heathers, particularly at the cutting stage and are often not totally effective on their own.

If amateur growers continue to propagate, grow and plant heathers in their gardens in suitable soils, using time honoured methods in which the plants are allowed to grow slowly as they would naturally, then they should encounter the minimum of trouble from pests and diseases.

Propagation — Back to Basics

Arnold Stow, High Wycombe, Bucks

I was somewhat surprised when the Editor asked me to prepare an article on propagation. Why me? I thought, when many a word has been written by more learned and experienced enthusiasts and professional nurserymen.

Then I realised what an inspired choice! I have over the past twenty years or more tried, and failed, with so many different methods that I should have got it right at last. In addition there doesn't appear to have been an article on this subject since the 1979 Year Book, so hopefully this will help the newer members of the Society wishing to increase their stock of heathers.

This article is based on what has proved successful for me and for the amateur gardener, not for the nurseryman who has the benefits, and costs, of heat and mist equipment.

There are three methods of propagation, by seed, layering and by cuttings. I have never consciously tried to germinate heather seed but anyone who has left peat undisturbed in a pot or tray for a few months will obtain their own batch of *Calluna* and *E. tetralix* seedlings whether they want to or not.

THE HEATHER SOCIETY

Layering is simply selecting a plant, covering with a peat and sand mixture, but leaving the tips showing and, subject to the time of year, within six to nine months the majority of the shoots will have produced roots which can then be separated from the parent plant and potted on. The advantage of this method is that if, having looked at a few shoots and found rooting has not taken place, they can be covered again and left a little longer. However it is rather an easy method and does not tax your horticultural abilities and satisfaction is limited.

Cuttings is the more usual method, but before taking them, prepare the compost. This should be fifty/fifty peat and sharp sand. Sedge peat will suffice, although I find Spaghnum has more 'body', but needs to be riddled through a half inch sieve before use.

Instead of sharp sand, a cleaner and lighter material that can be used is Perlite. Whichever medium is used it should be noted that the peat is there for moisture retention and the sand or Perlite to keep the compost open, both essential for successful rooting.

Once mixed the compost is pressed firmly down in the seed try; I use a piece of pegboard cut to shape and through the holes I push a match stick or nail. The board is then removed revealing the 'starter' holes. Cuttings are sometimes difficult to dibble straight into the compost and this operation not only overcomes this problem, but also gives evenly spaced planting. Some gardeners will state that cuttings thrive on company and that pegboard will only accommodate a little under two hundred in a standard tray, but it is easier when it comes to potting on when the roots can be gently teased apart from each other.

You are now ready to select your material. Ideally the cuttings should be one inch long of semi-ripened wood. Therefore the time will be from late April onwards and and period will extend to late August. The cuttings are dibbled

into the compost up to half their length, watered well, and then the container is either placed in a cold frame with the lights closed down or a plastic dome is used. Note that for the first six to eight weeks the cuttings require a humid atmosphere shaded from direct sunlight to prevent scorch, but with sufficient light to prevent damping off. Remember that it can only take one hour of direct sunlight to lose a whole tray of cuttings. Remember also that even if placed on the north side of a wall or fence your cuttings can receive direct sunlight in the height of Summer for a short time, as I have found out to my cost. This question of position is a tricky one, I have tried placing a cold frame under a tree to avoid having to use shading. We then have a poor Summer, ting on into 4" pots. The potting compost should consist of been poor. I now opt for a cold frame in full sun, but with adequate shading material.

With the lights down or with a plastic dome, little watering is required but as soon as rooting has taken place, evidenced by green shoots appearing, more air should be given and frequent watering will be required. During this period it is important to keep pinching out the new growth to encourage bushy growth.

With the onset of winter, even though the cuttings will be relatively hardy, some protection is required as a spell of hard weather will tend to lift the cuttings out of the compost and this should be checked, especially when the weather turns milder, when all that is needed is a little gentle firming. Cuttings taken earlier in the year will have made sufficient root growth to overcome this, but it can be a problem with later-rooted cuttings.

The following Spring the cuttings will be ready for potting on into 4" pots. The potting compost should consist of our old friends peat and sand /or Perlite to which is added an ericaceous fertiliser. I find Vitax Q4 perfectly acceptable and is readily available.

Plants in pots dry out very quickly and therefore due attention must be paid to the watering. During this period it is important to continue the light pruning process before planting out in the Autumn or if preferred, the following Spring. If left in their pots after this they will have exhausted the food supply in the compost and will also become root bound.

I have made no mention of feeding until the potting on stage. However a weekly application of half strength Phostrogen once the cuttings have shown signs of rooting is beneficial although by no means essential. Feeding should stop in early August to enable the plants to harden off before the Winter.

Do not think you are restricted to taking cuttings during the growing season. I remember admiring a plant of *Erica erigena* 'Irish Dusk' in a member's garden one December. I was offered, and accepted, a few cuttings and on returning home placed them directly into open ground and placed a jam jar over them and achieved the desired results.

Propagation is fun and generally easy, but nature still has a way of reminding you who is in charge. Whenever I am asked on how I propagate my heathers I generally reply, "The Three P's" which translated stands for peat, perlite and a prayer. Whatever we achieve down here is subject to a little divine intervention.

The *Erica scoparia* in Madeira

David McClintock, Platt, Kent.

Erica scoparia is one of the Tree Heaths. Typically it grows to 2 m, but in the islands of the E. Atlantic, it can attain 6 m, and 63 cm in girth. The type is native in the western parts of Italy, in Sardinia and Corsica, through

southern and western France south of the river Loire to the Croizon peninsula south of Brest, where it was introduced with material for German fortifications, (Dizerbo, 1974). A similar source is postulated for its occurrence on the islands of Terschelling and Texel off the north coast of Holland, where it has been known since 1952 (van Costrom & Reichgelt, 1956). It is native in the Iberian peninsula and the Balearics and extends eastwards along the North African coast as far as Tunisia. The species in a broad sense occurs also in the island groups of the Canaries, Madeira and the Azores — where it reaches 6,000 ft. on Pico.

The typical plant, ssp *scoparia* was formally described by Linnaeus in 1753 '*Antheris bicornibus, inclusis, corollis campanulatis longioribus, foliis ternis patentibus, ramis tomentosis*'. The type is in the Linnaean herbarium.

The plants in the Azores however were separated at specific rank at Hochstetter in 1844 as *E. azorica* — '*Caule arborescente, ramis ferrugineo-rufis, ramulis foliisque junioribus hispidulo-puberulis, foliis adulto ternis linearibus dorso sulcatis scabriusculis, floribus unilateraliter racemosis cernuis, sepalis basi connatis, tubo corollae limbum subaequante brevioribus, antheris inclusis, stigmate peltato longe exerto*'. But such marginally distinctive geographical races, isolated from their congeners, are best regarded as subspecies; and it was to this rank that Prof. D. A. Webb reduced this in 1972, remarking that except in its much shorter calyx and slightly shorter corolla, it did not seem to differ consistently from the type. But it differs also in the attractive way its foliage can spread in waves and curls, as well as being capable of growing much larger.

The populations in the Canary Islands were distinguished in 1884 by Webb and Berthelot as var.

platycodon. 'Erica glabra foliis late linearibus; inflorentia laterali, ramis dense floriferis; bracteis 3 remotis foliolis calycinis basi connatis, ovato-lanceolatis, corolla dimidio brevioribus, corolla ante anthesin globosa, aperte late campanulata, antheris obtusis, muticis inclusis, stigmate peltato, exerto, capsula depressa glabra, seminibus utrinque obtusis, puncticulatis'. This they summarised as '*Species canariensis omnibus partibus major est et fortior corollasque habet valde apertas atque intense fucatas, sed differentias nullas revere specificas videre potuimus*'. It was upped to subspecific rank in 1976 by Alfred Hansen and Gunther Kunkel. Platycodon means with broad bells, i.e. corollas, but they are larger rather than merely broad. What I find noticeable about this subspecies, shown well by Kunkel (1986), is the way the sparser longer leaves stand out from the stems, nearly as much as in the next subspecies, both of which can grow larger than ssp. *scoparia*.

The populations in two of these well-separated Atlantic island groups having been deemed to merit subspecific rank, what about those in Madeira and its off-island, Porto Santo? It does not follow that, because Madiera is separated by 300 miles of ocean from the Canaries, its heather will automatically differ. In fact they do resemble each other more than those of the Azores or of the Mediterranean.

However, there seem sufficient distinctions to regard the Madeira plant as a third insular subspecies, *maderincola* (the epithet *maderensis* is avoided because there is already the endemic heather *Erica maderensis*). Its characters include a laxer habit, leaves which can be even longer, more widely spaced and spreading when mature, a shorter calyx and corolla with the stigma more exserted, both paler in colour. Detailed comparisons of the four subspecies are set out in the Appendix, based on specimens at Kew, the BM (NH), the Heather Society's herbarium and plants in my own garden.

The formal description runs *Erica scoparia* L. subsp. *maderincola* D. McClintock differt a subsp *platycodon* habitu laxiore, foliis longioribus ad 13.5 mm, calyce et corolla minoris, ad 1.7 et 3.1 mm, stylo longiore exerto, corolla et stigmate pallidioris. Habitat in insulis Madeira et Porto Santo. Holotypus ex Madeira in horto Bracken Hill, Platt, Kent, 31 May 1980, coll. D. McClintock. Hb Heather Society.

References

- Dizerbo, A.W., 1974, *La vegetgation et la flore de la presqu'ile de Crozon*, Brest: 86
- Hansen, A. and Kunkel, G., 1976, *Cuadernos de Botanica canaria* 26/7: 79-80.
- Hochstetter, C.F., 1844. in Seubert, M.A. *Flora Azorica*: 40
- Kunkel, G. 1981. Arboles y Arbustos de las islas Canarias, *Edrica*: 77
- Linnaeus, C. 1753. *Species Plantarum*: 353
- van Oostrom S.J. and Reichgelt, T.J. 1956. *Acta Botanica Needandice*: 108
- Webb, D.A. 1972. *Botanical Journal of the Linnean Society* 65: 259
- Webb, P.B. and Berthelot, S. 1844. *Phytologia canariense* III (2): 14

THE HEATHER SOCIETY

Appendix

Habit	scoparia	azorica	platycodon	madeirincola
height to m	open	dense	dense	rather dense
girth to cm	2.5 (-4)	6.0	over 4.0	over 4.0
Leaf length mm	18.0 (3.5-)5.5-6(-7.5)	- (3-)4-5.5	- (6-)7-9(-10)	63.0* (8.5-)10-12(-13.5)
angle	spreading	erect	spreading	spreading
Calyx length mm	(0.7)-1-1.5	0.7	1.5-2.5	(0.8-) 1.7
Corolla length mm	(1.2-)2-2.5(-3)	1.5-1.75(-2.5)	3.0-3.5	(2.0-)2.5-3.1
colour lobes	greenish white pink	dull red greenish	dark pink	whitish pink whitish
Style length mm	3.0	3 - 3.5	(3.0-)4	(1.9-)3.5-4(5)
exsertion	none or slight	far	-	far
stigma colour	crimson	rich purple	dark purple	fawn pink
shape	slightly convex convex	½-globular + blunt projections	flattish	flat to convex
Native in	Mediterranean	Azores	Canaries	Madeira and Porto Santo

*Section of trunk in the collection of R. Crow of St. Neot, Cornwall, 1979.

Erica manipuliflora Salisb. in Southern Yugoslavia, October 1988.

A. W. Jones, West Camel, Somerset.

Perhaps I should begin these notes with a few words of explanation as to why I was so eager to make a round trip of almost 3,000 miles to look at a single heather species at the western end of its range.

Terry Underhill (1) wrote, in the general section of his description of *E. manipuliflora*, "This Mediterranean species occurs naturally at the edges of woods. It is rarely seen in cultivation. It likes lime, growing on sandy hills or by limestone outcrops". It was the phrase "It likes lime" that first aroused my interest in this species in about 1977.

The description is accompanied by a line drawing by Marilyn Evans, which shows an upright plant with rather

sparse short leaves, and flowers like those of *E. vagans*, but carried in terminal clusters, like "little hands".

The plants that I finally obtained, after some searching*, had flowers on long stems, like rather open racemes of *E. vagans*. I was intrigued by the differences between my new plants and the drawing.

In February 1981 I visited the herbaria at the British Museum (Natural History) specifically to look at the specimens of *E. manipuliflora*. I saw plants with terminal clusters of flowers, plants with *vagans*-like inflorescences, and yet others with gaps between groups of flowers on long terminal shoots with short flowering side shoots towards their bases. In the books I had read, where a blooming period was given (1,2,3,4) it was said to be from August to October, and indeed, most of the specimens had been collected at about that time of year. However, there were also sheets with plants in bloom, collected in the Lebanon between November 1883 and February 1884, from limestone hills above Beirut, and from Lokrum Island near Dubrovnik on 14th April 1935. Later I learned of a voucher at Kew, collected at Ragusa (Dubrovnik) in full bloom on 17th April.

I asked David McClintock about *E. manipuliflora*, and he provided more information about the species. He pointed out that the typical plant had a narrow interrupted inflorescences, very short erect leaves and whitish stems. It comes from the northern & western Aegean. Plants from the Adriatic are similar to *E. vagans*. The eastern form of the species has certainly been known since 1770, and is said to have been introduced into Britain in 1774.

**E. manipuliflora* is now rather more widely available in this country.

THE HEATHER SOCIETY

In 1845 Link named the Adriatic plant *E. anthura*, the type specimen coming from Split. Later (5) he described it as *E. naematodes*, also from Dalmatia. However Grenier and Godron (6) were uncertain about the presence of *E. manipuliflora* in Istria and Dalmatia in 1852.

We agreed that we should visit southern Yugoslavia to study the species in the wild there as soon as opportunity presented itself. In the event, that did not happen until 1988, when we were both free from the 4th to the 9th of October. The plan was that we should fly to Dubrovnik, hire a car and drive along the coast to Orebic, where we would take the ferry to Korcula. Thereafter we would do what seemed most worthwhile until it was time to return to Dubrovnik for the flight home.

I duly met David at Heathrow at lunch time on Tuesday the 4th. We took off two hours late, and arrived at Zagreb too late to catch the onward flight to Dubrovnik. We were put up in an hotel overnight, and the next morning were waiting at 6.0 a.m. for a promised coach which never arrived. A taxi driver assured us he could get us to the airport in time for the 7.20 flight. In order to do so he drove with considerable élan, passing buses and lorries on the right or left, seemingly as the fancy took him. I must admit that I was slightly apprehensive when we were passed and stopped by armed militia, but they only wanted to tell the driver that the boot was open.

We caught the plane, and landed at Dubrovnik airport at 8.10 on a beautiful sunny morning. I glimpsed my first wild plant of *E. manipuliflora* the instant the bus left the airport, and it was present, as isolated plants, along the journey into the city.

Once in Dubrovnik we failed to find breakfast, but we

did hire a small car. I had foolishly left my driving licence in Somerset, and David had the unenviable chore of driving throughout the trip. I thank him most heartily for doing so. Yugoslav road builders do not pander to people like me who have an irrational fear of heights. Sheer drops are frequent, and there are few roadside barriers. Despite David's excellent driving, I suffered many moments of abject terror, and the occasional sight of wrecked cars far below did little to calm my nerves.

We left Dubrovnik on the road that follows the coast all the way to the Italian border. After about ten miles we stopped at Trsteno to look at two vast Oriental Planes and try, again unsuccessfully, to obtain breakfast. From here on the road had been built quite recently, and skirted the villages. Since at many places it had been cut into the hillside, it was quite narrow, but the surface was generally good, and there were parking places from time to time. There were high limestone hills to our right, and the Adriatic, with its islands, below us on the left. We often noticed *E. manipuliflora* from the car.

Fifteen kilometers further on, when we were about ten km south east of Slano, we stopped again to make our first collection of herbarium specimens and cuttings. Here the plants were frequent, but not dominant. They were growing in clefts in the vertical limestone walls of a road cutting, and among coarse chippings at the side of the road. Above the road they flourished amongst the boulders that covered the hillside. Most were about two feet tall, and looked very much like wild plants of *E. vagans*. However, some were quite prostrate, one being no more than two inches tall, and with yellow foliage. The flowers had faded on most, though some were in full bloom, and a few were still to open. The flower colours ranged from H11 (lilac pink) to near white. During the trip we were to see many plants with flowers that appeared to be white, but the dark red pedicels and deep coloured anthers suggested that the corollas would turn

THE HEATHER SOCIETY

pink as they age. We did however, find true white-flowered plants with pale green pedicels and light coloured anthers. Dark coloured flowers were rare.

About a kilometer north of Slano we saw *E. manipuliflora* as the dominant plant for the first time, but the road was too narrow to allow us to stop and examine it more closely.

At Doli we left the main road and drove onto the Peljesac peninsula. We were now on an older, still narrower road that passed through the centres of villages and small towns. The surface was rather indifferent at times.

We stopped again about two kilometres west of Doli, where isolated plants of *E. manipuliflora* were growing in the garigue. At the roadside a plant grew downwards over a rock. In competition with taller species some plants had reached a height of 1.8m with stems 1 to 2 cm in diameter. It was here, on our return journey, that David made the following list of some of the woody plants growing with *E. manipuliflora*. *Cistus cf. incanus*. *Colutea arborescens*, *Erica arborea*, *Ficus carica*, *Helichrysum stoechas*, *Juniperus oxycedrus*, *J. phoeniceus*, *Myrtus communis*, *Olea europea*, *Paliurus spina-christi*, *Pinus halepensis*, *Pistachia lentiscus*, *Quercus ilex*, *Q. pubescens*, *Pyracantha coccinea*, *Rubus fruticosus agg.* The combined scent originating from some of these in the warm air was delightful. To the list I would add *Clematis* sp. and *Arbutus unedo*. The latter were about 2m tall, and carried only ripe fruit. David ate these in quantity and reported that, contrary to the common belief, they were not unpalatable.

We crossed the first range of high, rather barren hills on the peninsula and dropped to sea level on the northern coast. Two or three kilometres east of Dráče we stopped by a salt marsh where Sea Lavender (*Limonium* sp.) was growing. On the landward side of the road we found plants

of *E. manipuliflora* up to 75cm tall, with stout stems and long somewhat interrupted inflorescences. Here we also saw *Colchicum autumnale* and *Cyclamen hederifolium*.

From here the road ran south on low ground through Janjina and Trstenik, and then turned north west and back into the mountains. We stopped at the top of the last pass before Orebic, where there was a large memorial to the Partisans. We could see the sea far below us. We measured a plant of *E. manipuliflora* 1.7m across, with stems trailing downwards for 1.5m.

We stayed overnight at Orebic. On Thursday morning I was awoken at 6 a.m. by a thunderstorm with heavy rain and high wind. Fortunately the rain had stopped by 8 o'clock, and the weather began to improve steadily. At 11.30 we boarded the car ferry for the short trip to Korčula. On arrival we booked into an excellent hotel, lunched and strolled briefly in the beautiful old city before we set off to drive to the other end of the island in search of *E. manipuliflora*. Though present in other areas, we found it most abundant in the eastern end of the island within about 10km of the city. We stopped once to collect, and found the same variations that we had seen previously.

On Friday morning it had again been raining and was dull. We made an early return crossing to the mainland, and began to retrace our route to Ston. West of Janjina, just before Pijavicino, we came across a heather moor which we had inexplicably missed two days earlier. *E. manipuliflora* was the dominant species. There were some pines and scrub oak, and the site was obviously wet at times, since the Black Bog-rush (*Schoenus nigricans*) was also present. The variations in both habit and colour of the heather was greater than we had found at most other places. Some plants were upright and up to 1m tall, while others were prostrate. Some had patent leaves, while the leaves of others were appressed, and all intermediate angles were present.

THE HEATHER SOCIETY

However, none of the plants which I examined had whitish stems. As everywhere, the leaves were comparatively long, and the plants in general indistinguishable from *E. vagans*, at any rate at a distance.

We passed through Ston and on to Doli, where we rejoined the main coastal road and continued north west towards Split. Very soon we stopped seeing *E. manipuliflora* from the car, though at first there was no apparent change in the terrain. Soon we were passing through high, rather barren limestone country, and then dropped down to the marshes of the river Neretva at Opuzen. We were soon back on higher ground, and next sighted *E. manipuliflora* just south of Drvenik, where there were many plants growing on a stony hillside. There was a good range of colours here, with plants from white to H12 (heliotrope). Some of these plants had very small corollas, which made the stamens seem longer than normal. Plants which were growing in the walls of a road cutting were upright, rather than trailing down. Evidently the trailing habit is not developed by all plants growing in suitable sites.

We were now approaching the area where the ranges of *E. manipuliflora* and *E. multiflora* overlap in Yugoslavia. We searched for the latter species, though it would not be in flower, but we did not see it.

About 2km north west of Makarska we found *E. manipuliflora* growing in a pine wood. We measured the height of one plant as 2.25m, with others at 1.8m. These were flowering freely despite the deep shade. On an adjacent olive terrace the plants were about 1m tall. The colour range was from pseudo-white to pale pink. Once again plants with small corollas and far-exserted anthers were present.

We spent the night at Makarska, and the following morning began to retrace our route to Dubrovnik. It was necessary to confirm the absence of *E. manipuliflora* from so much of that journey. I kept a sharp look out, and in the 70km from just south east of Drvenik to just north west of Slano, I saw two plants. By now I had grown quite proficient at spotting plants from the car, and on our return to Dubrovnik I noted it well within the city boundaries and close to the docks.

We finished the trip by driving south of Dubrovnik and turning inland towards Trbinje. We rapidly reached an altitude of about 1,000 ft, and plants were still present. After about 35km they petered out, but we had no time to go further to see if they reappeared.

The following morning I saw *E. manipuliflora* from the aircraft window, by the runway, as we took off to return home.

We had seen *E. manipuliflora* growing in a variety of habitats. There was considerable diversity among the plants, though usually it looked just like *E. vagans*. The Yugoslavian plants appeared to differ from both the specimens and the descriptions I had seen of the north Aegean plants. However, I wonder if there are intermediates between these two apparent ecotypes along the shores of the Gulf of Corinth or in the Peloponnese.

I am deeply indebted to David McClintock for organising a memorable trip, for driving me so many miles, for teaching me so much about the plants we saw, and for his unfailing good companionship throughout.

THE HEATHER SOCIETY

References

1. Underhill, Terry L., *Heaths and Heathers*, David and Charles, Newton Abbot, 1971
2. Letts, John F., *Hardy Heaths and the Heather Garden*, 1966
3. Polunin, Oleg, and Huxley, Anthony, *Flowers of the Mediterranean*, Chatto and Windus, London, 1972.
4. van de Laar, Harry, *The Heather Garden*, Collins, London, 1978.
5. Grenier, J. C. M., and Godron, D.A., *Flora de France*, Vol. 2., 1853.
6. Link, J.H.F., *Botaniser Notiser*, 1851, p. 183.

Heathers and Heathlands

David Small, Creeting St. Mary, Suffolk

On 20th October 1988, the Linnean Society held a joint meeting at its Burlington House, Picadilly, headquarters on a topic held dear to most of us in the Heather Society, namely the ecology of the flora and fauna of heathlands (lowland heaths as opposed to high moorlands). A number of our members were present to hear papers from eminent speakers. It was particularly pleasing that the BSBI should have accepted David McClintock's suggestion of this subject as their part of the Linnean Society's bi-centennial celebrations.

Before the programme started, Mr. Robin Herbert, President of the R.H.S. accompanied by our President, the Director General, presented the Linnean Society with a marvellous illuminated address, which we were able to see in detail whilst having lunch in the library.

After the President of the Linnean Society, Professor M. Claridge had welcomed the participants, Professor Charles Gimingham of the University of Aberdeen read the first paper saying that heather must now be one of Britain's most studied plants because of its

importance to the landscape and the fauna it supports. He gave three reasons why *Calluna* was able to dominate large areas once the pre-requisites of absence of shade and no temperature extremes were met. Firstly, its ability to obtain nitrogen from amino acids and ammonia due to a symbiotic mycorrhizal association. Secondly, its capacity for producing adventitious roots. Thirdly, because of its high photo-synthetic ability, brought about by the fact that side shoots are its chief photo-synthetic media and the density of shoots on the periphery of the plant is constant. Referring directly to the lowland scene, he added extra factors such as its high reproductive capacity and easy dispersion of seed. One million long lived seeds per square metre is on record. Germination is intermittent, providing an extra safeguard. He explained that heather growth is cyclical, a centre of a plant will die out after 20-25 years, the rest of the plant degenerates after 30 years allowing other species to occupy the site before heather re-colonises. This cyclical process can be broken by birch, oak or pine. He concluded a fascinating account by saying that there was some evidence to suggest that increased availability of nitrogen (e.g. from farming) causes early senescence of heather, as does polluted rainfall, bracken and grasses.

Dr. Charles Nelson started his talk on the Irish heathers by quoting from a 7th century poet who it is believed provided the first recorded account of heathers in Ireland. He gave brief accounts of the distribution of *Calluna*, *Erica* and *Daboecia*, pointing out how Linnaeus had mispelt the name of St. Dabeoc from Lough Dearg. Those of us who were lucky enough to go on the escorted tour of Irish Heaths in 1983 will know that these species are more varied in Ireland than on the mainland of Britain, and Charles expanded and updated the mysteries surrounding *E. mackiana*. Those who are not familiar with the story should read the intriguing accounts by David McClintock and Charles in the 1983 Year Book. He said that recent work had made it patently clear that the *E. mackiana* in Ireland

was not one single clone and this, therefore, was not the reason for its apparent sterility. He also said that the Spanish *E. mackiana* collected by us in 1982 did set seed in Ireland. So the mystery as to why the "native" *E. Mackiana* in Ireland does not appear to set seed remains and deepens. He went on to discuss the hybrid between *E. tetralix* and *E. mackiana*, *E. x stuartii*, saying how it was abundant in three Irish stations, and that back-crossing was occurring to provide a continuous spectrum between the two species. Having briefly discussed two of the rarer *Erica* in Ireland, *E. ciliaris* (just six plants) and *E. vagans* (all white), he went on to say that work done by Peter Foss in Dublin suggested that *E. erigena* was introduced into Ireland in the 15th century from Spain as wine flask packing! There is no evidence of *E. erigena* pollen before that date. He concluded by showing some of the most remarkable slides of heathers growing in the most unlikely sites - the limestone pavement of the Burren.

Dr. Andrew Byfield of the Nature Conservancy Council gave the third paper which concentrated on the heathlands of south west England. He explained that *E. vagans* was not only found on the serpentine of the Lizard, a popular misconception, but also on the gabbro of that peninsula. Serpentine has a high magnesium, chromium and nickel content, but is low in calcium, potassium and phosphorus. Gabbro on the other hand has a higher calcium content, with lower amounts of magnesium, cadmium and nickel, making it ultra basic. *E. vagans* is completely excluded from the acid soils of the Lizard. He went on to explain that there were two types of heathland on the west of the Lizard, "Rock heath", characterised by *Calluna* and *Festuca ovina*; and "Mixed heath", with *E. vagans* and *Ulex europaeus*. On the loess deposits found in the centre of the Lizard, "Short heath" is dominated by *Agrostis curtisii*, but *Calluna*, *E. tetralix* and *E. cinerea* can be found. The fourth type of heath which dominates the main area of the Lizard plateau is "Tall heath", characterised by *E. vagans* and *Schoenus nigricans*, the Black Bog Rush. He concluded by briefly

mentioning some of the rarer heaths found on the Lizard, *E. x williamsii* and the eglandular *E. ciliaris*.

David McClintock gave the final paper of the morning and started by pointing out that despite the intense study of heathers, little work had been done on some aspects, such as chromosome counts. (*Calluna* is $2n=16$, *Bruckenthalia* $2n=30$, *Daboecia* and *Erica* spp $2n=24$, and *Andromeda* $2n=48$). He widened the discussion to cataloguing the heathers found in Europe and adjacent areas. *Daboecia azorica* should perhaps be considered a sub-species of *D. cantabrica*, as no hairs on the corolla of *D. azorica* and its smaller leaves and flowers were hardly good specific characteristics. *Andromeda glaucophylla* he did not consider a good species. *Calluna vulgaris* had a very wide range of variation, including late-flowering groups, multi-bracteate plants, and three forms of bud-flowerers. *E. andevalensis*, named only in 1980, had shorter glandular hairs than *E. mackaiana* of which it is best considered as a sub-species. *E. cinerea* had the widest range of flower colour, and also schizopetalous forms. *E. maderensis*, superficially similar to the slenderer *E. cinerea*, is a distinct species, never having its leaves grouped along the stem, a characteristic of *E. cinerea*. *E. terminalis* is the only *Erica* not to have its pollen in tetrads. There are three records of white form which is still to be re-found. *E. tetralix* has *fissa* forms which are common at the beginning of the flowering season, but the later flowers are entire. *E. arborea* is the only European species to penetrate deep into Africa, south of the equator and growing to 4269m, in Ethiopia. Pink flowers are elusive. *E. lusitanica* is now a major weed in New Zealand. He hoped the name *E. carnea* would be retained for our beloved winter heath instead of *E. herbacea*. He felt that *E. erigena* was not worth specific status, as height and size were not good taxonomic distinguishing features, although he had to concede that most hybrids with *E. carnea* were sterile. The distinguishing characteristics between *E. vagans* (western Europe), *E. multiflora* (western Mediterranean), *E. anthura* (Adriatic) and *E. manipuliflora*

E. manipuliflora (Aegean area) had been confused for a long while, but they seemed distinct. After briefly mentioning *E. umbellata*, David concluded his talk by saying that *E. sicula* had been re-discovered in Sicily.

Miss Lyn Farrell of the Nature Conservancy Council started the proceedings after lunch, by giving the latest classification of heathlands. Of the 16, 12 are found below 300m. To confuse matters these classifications are given codes identical to our heather colour chart, so H1, instead of meaning amethyst is *Festuca ovina/Calluna* heathland, typified by the Brecklands of East Anglia. H2 is *Calluna/Ulex minor* as seen in the Weald of Kent; H3, *Ulex minor/Agrostis curtisii* heath of Dorset; H4, *Agrostis curtisii/Ulex gallii* of south west England; H5, *E. vagans/Schoenus nigricans* of the Lizard; H6, *E. vagans/Ulex europaeus* also of the Lizard; H7, *Calluna/Scilla verna* of western Britain; H8, *Calluna/Ulex gallii* of the north Midlands; H9, *Calluna/Deschampsia flexuosa* of the south Pennines; H10, *Calluna/E. cinerea* of central Scotland; H11, found on sand dunes, and H12, *Calluna/Vaccinium* of northern Britain. She concluded her talk by discussing how important it was to retain Britain's remnants of Europe's fast diminishing lowland heathland. In Europe there were 300 kilohectares of lowland heath left, of which 60 kilohectares were in Britain, 4.5 being in the Breckland.

Dr. R. Moss of the Institute of Terrestrial Ecology gave an interesting account of heathland management and how management practice was modified for specific fauna. Small game have little impact on heather and can be supported on heather alone, but sheep, cattle and deer need other food as well. Red deer have increased considerably since the last war and may be the cause of a slow decline in upland heather swards. Large area burning is favoured when grazing sheep or deer, but small patch burning causes red grouse to take up smaller territories and hence their density can be increased. Artificial feeding of heather tends to

work against red grouse in favour of sheep. Dr. Moss believes that the time may now be right to bring back grouse in favour of sheep on economic grounds.

Dr. Nigel Webb, also of the Institute of Terrestrial Ecology, concentrated on the invertebrates found in southern heathlands. He said most fed on *Calluna* with some 40 insect species actually depending on it for food. Most of these insects do not travel far, some never leaving the plant on which they were born. This apparently, tends to be common where there is a dependence on low nitrogen food plants. There are three species of thrips which are important for the pollination of heathers, the young females flying to neighbouring plants to mate and lay eggs. There are about 30 species of moths dependent on heather, the most spectacular being the Emperor Moth (*Saturnia pavonia*). Britain's only representative of the silk-moth family, found on both upland and lowland heaths. The caterpillars feed communally initially, then change colour, becoming solitary and difficult to find. Only three butterfly species can be considered truly heathland species, the Grayling, *Hipparchia semele*; the Green Hairstreak, *Callophrys rubi* and the Silver-studded Blue, *Plebeius argus*. The latter has a mysterious association with ants, which in turn need an open canopy. The Silver-studded Blue stays within a 5m range from where it emerges from its pupa.

The penultimate paper was presented by Dr. Ian Spellerberg of Southampton University, who discussed heathlands as habitats for reptiles. The Sand Lizard, *Lacerta agilis*, is primarily found in Dorset, but also in the sand dunes north of Liverpool with scattered communities elsewhere. It requires basking temperatures of 26°C, 3°C higher than the Common Lizard, *L. vivipara*. It lays a clutch of six quite large eggs, three on a 10p piece, the young hatching in August. He related work done on both lizards in an attempt to understand their habitat requirements more fully, to stem

the decline in population. To do this lizards were fitted with tiny transmitters which enabled them to be tracked more easily. On finding a lizard, observations were made over a 2 x 2m quadrant on the nature of the ground vegetation, soil characteristics (for egg laying and hibernation), width or area of side verges and the amount of sunshine the site received. The survey found that lizards selected sites which were suitable for basking, and the surrounding vegetation was structurally complex. They prefer large areas that have undergone perturbation, which led him to pose two questions. Firstly, is there a conflict between restoration of heathland and habitats for small vertebrates? and secondly, should the Linnean Society support a programme of large scale restoration?

The final paper, and to my mind one of the best, was given by Ted Oliver from Stellenbosch, South Africa. He extended the discussion to the heaths of southern Africa, stating that there were now far more than 600 species of Erica, of which nine occur in East Africa and 630 in the Cape region of South Africa. 175 of these occur in a $\frac{1}{4}$ degree latitude/longitude of the S.W. Cape, or put another way, an area the size of the Isle of Wight.

The main variation was in the shape and size of anthers, which could almost provide a key to the genus. Oliver demonstrated by the position of bracts that *Philippia* and *Erica* are really one genus, which adds a further 47 species to the list. He went further to suggest that *Blaeria* too should be included in *Erica*, as the only distinguishing feature (stamen count) does not work. (*Blaeria*, has 4, *Erica* 4 to 8). He even postulated that the European species *Bruckenthalia* should be an *Erica*.

Ted Oliver not only gave a detailed botanical treatise, but delighted us with some superb slides of Cape Heaths; and as if that was not enough, he had been out in the

mountains the previous Sunday and picked 40 species to display to us, showing the marked variation in form and flower.

Summarising the meeting, Professor Clive Stace, President of the Botanical Society of the British Isles, commented on the varied papers, wealth of information and competence of the speakers. It was remarkable how the ecology was dominated by just a few in a family of 3000 species, the family Ericaceae. The papers will be published in the *Botanical Journal of the Linnean Society* later this year.

The “*Viridiflora*” Variants of Cornish Heath

David McClintock, Platt, Kent.

A Cornish Heath, with its inflorescence adorned with a series of feathery bract-like growths has been in cultivation for over 70 years. The quite pale green effect of the usually flowerless racemes has a remarkable charm too little esteemed by flower arrangers. This article sets out the history of this aberration and proposes a name for it.

There are specimens at Paris collected from two plants on 4th September 1897 by M. L. Chevallier from the Lande pres des Sapins, Precigné, Sarthe. He named them ‘*Monstrosa*’. But, like practically all botanists, he did not propagate his strange plants up. I doubt if anyone took notice of Chevallier’s find, at least no mention was made of it when

THE HEATHER SOCIETY

the discovery was made, which put this curiosity on the map. This was 15th September 1915, when the great plantsman P. D. Williams sent specimens from Cornwall to the RHS Scientific Committee "in which the flowers were replaced by multiple bracts". It seems that he had found it some six years earlier in 1909. It was again mentioned to the Committee on 25th March 1930 by Mr. F. J. Hanbury, who, on 15th August 1933 showed the Committee specimens from his garden of what he called the curious "wheat ear" form, saying that it produced an occasional flower. There are references to this plant in Worsdell's *Plant Teratology*, Vol.1 p.124, 1916 and in Thurston's *Trees and Shrubs* of 1930, pp. 113 - 4.

Dr. G. C. Druce in the *Report of the Botanical Exchange Club* for 1919, p. 569 wrote --Mr. P. D. Williams of Lanarth, Cornwall, kindly sent me last September a curious variation of the Cornish Heath, which he had known for ten years. The cuttings come quite true. It never really flowers but young vegetative shoots are formed with tiny clustered leaves 1mm long. The peculiarity may be caused by a mite or gall, but Mr. W. G. Smith to whom I sent it, has not seen anything like it. Mr. E. W. Swanton has little doubt that a mite causes this abnormality in growth". This is repeated on p. 86 of the 1922 *Supplement to the Flora of Cornwall*.

At Kew are contemporary specimens and notes. Mr. Williams wrote on 20th September 1919 that he thought he had sent it to Prof. Balfour at Edinburgh, but, if so, the specimen has not been traced. Mr. Swanton (*in HB Oxon*) wrote on 4th February 1920, amplifying what Druce had reported "Though I failed to find any direct evidence I have little doubt that mites cause the alteration in growth, for the hairs of the foliaceous corollas are of the type usually associated with mites — an *Eriophyid* ... I am sure mites must be the cause". There is at Kew a very slender example sent by Mr. Williams to Sir A. Hill, on 20th April 1924.

In 1930 - 33 the late Dr. Renatus Kempthorne collected variations of this species at the Lizard. One, of which he found two separate bushes on 25th August 1932, he inexplicably called "Flore Pleno". The specimens at Kew show that these were a viridulous form. He wrote, in the *BEC Report* for 1932, p. 477, that Dr. Turrill at Kew would deal with this aberration, but he never did. Dr. Kempthorne years later told me that he could and would refind his bushes, but this he too never did.

In 1964 and 1965 I collected samples of 'Viridiflora' from commercial sources and sent them to Dr. W. G. Massee, the specialist in mites. In letters to me, e.g. on 30th June 1965, he wrote that although it looked like mite damage, try as he did, he found no sign of mites - as did Swanton earlier.

An argument against mites comes from analogy with *E. tetralix* 'Mary Grace'. This is an example of f. *fissa*, which occurs not infrequently in the wild, when the corollas get tattered early in the season, and mites have been found to be responsible. But these mites cease to be active after a while; consequently later plants are free of this affliction. The viridulous forms of *E. vagans* however come later into flower and any corollas which may appear, do so throughout the season and all are normal and intact. One wonders if the cause is not somehow inherent, an instability of the genes, and no outside agency.

All this time, there was only one clone grown or indeed generally known to have been found. On 14th September 1977 however, a very similar plant ("Hopkins Original") was found between Leach Pool and Bonython on the Lizard by Dr. J.J. Hopkins, Dr. L. Frost and Dr. H. H. Martin (cf *Heathers of the Lizard District*, 1982:4). It was there in 1979 (and still was recently), when Hopkins, Frost and Dr. D. Coombe found several more plants near the original one. I have samples, sent me at the time, labelled "Frost 1 - 6".

THE HEATHER SOCIETY

The occasional pink corolla is not unusual, and twice I have had evidence of a whole raceme reverting to normal. But the true explanation remains elusive and unproven.

The question arises when this bracteomanic plant was first called by the misnomer of 'Viridiflora'. The first mention I know of it in the trade, so Gen. Turpin found, is in the catalogue of W. E. Th. Ingwersen for 1937, when they called it "Viridis". This was changed from 1942 to 'Viridiflora'. Will Ingwersen tells me that they got the plant from Cornwall, but does not know how the name arose. Maxwell & Beale never listed it.

Now, however, that various similar variants are known, a formal name is needed to cover them all. Since the flowers are pink, when they appear, and not green, *viridiflora* is not suitable, valid though it is as a clonal epithet for P. D. Williams's original plant, still the only one being sold. I propose therefore *Erica vagans* L. f. *viridula* D. McClintock, differt bracteis novis pallido-viridulis, saepe pectinatis corollis plerumque nullis. Type *E. vagans* 'Viridiflora'. Garden at Cottswold, West Clandon, Surrey, coll: Maj.-Gen. P. G. Turpin 24 Oct. 1981. Hb Heather Society.

I am grateful for comments from Dr. D. Coombe, W. Ingwersen, A. W. Jones and Maj.-Gen. P. G. Turpin.

Heather Records

David McClintock, Platt, Kent

For some time I have been desultorily noting details of large heathers, sometimes how high up they grew, and what age they reached. For sure the figures below can be usefully added to, but they seem worth producing if only to act as an

incentive to better them.

Heights, unless otherwise specified, are just that, and not the length of a stem, which may not grow erect. The second figure is circumference (girth), unless it is clearly said to be diameter. The sources of the information are given (and can be amplified on request), unless they are my own notes.

Andromeda polifolia

8,000 ft. in Honshu, Japan (Wada, 1965 - 471)

Bruckenthalia spiculifolia

2,200m in Greece (*Mountain Flora*, 1986-738)

Calluna vulgaris

"The Hyest hethe that ever I saw, growtheth in Northumberland, which is so hyghe that a man may hyde hymself in". (William Turner, *A New Herball*, 1551).

2.20m in Killarney, S.W.Ireland. (*Botanist in Ireland* 1934, 321).

x 97mm (31mm diameter) at Marburg a.d. Lahn. (Kanngiesser, 1909).

x 72mm (23mm diameter), 52 years old in south Norway. (Schbeler, *Vindarion Norvegicum*, 188:195)

x 24.5mm at base, 32 years old on Rotherhope Fell, Cumberland. (Kanngiesser, 1910:520).

2,700m in Tessin (Hegi V (3): 1650).

7,000 ft on Pico, Azores (Drouet' 1866, p.109).

1095m (3,595 ft) in Cairngorms.

58 years old in north Norway (nork, 1946).

Daboecia azorica

2,200m on Pico in the Azores.

D. cantabrica

Stems 260 and 180cm long x 7.5cm on roadside bank at Ballynahinch, Co. Galway, 1975.

1,312m (4,300 ft) in Spain. (Woodell, 1958).

580m (1,900 ft) in Connemara. (*Comital Flora*, 1932, p.191).

D. x scotica

Stems 22 ins long on 'Goscote'. 1988.

Erica andevalensis

3 - 4 ft. (H.S.Y.B., 1983, 35)

E. anthura

7 ft. 6 ins., just north of Makarska, Yugoslavia. 1988

4 ins at base of another plant. 1988

E. arborea

20 - 30 m in Canaries (probably Tenerife). (J. Buttikofer, *Schweizer Naturschutz*, 1952, 18/3, 76)

Over 20m, Agua de los Llamos, La Gomera, Canaries; others 80 cm in diameter. (*Naturalia hispanica*, 1977, 7, 76)

20 x 1m, Canaries. (*Fl. Forestal*, II, 1890, 72)

65 ft "on the Mediterranean Coast". *Living Plants of the World*, 1967, 190) Surely an error for Macaronesian plants.

50.38 ft. (15.52m) x 7.1 ft (2.16m), Madeira. (*Flore des Serres*, 1869/70, 101-2).

x 78.5 cm at base. Africa. (*ibid*)

50 ft. in Tenerife (Photos at BM and Kew, received 1901)

x 157cm (50cm diameter). Canaries. (Pitard and Proust, 1908, 39).

43 ft x 78 ins (at 2ft.) Mercedes mountains, Tenerife. (C. Ingram, *Garden Illustrated*, June 1952, 163).

7 - 8 m x 80 cm, La Gomera. (Kunkel, in litt, 1975)

40m branches on fallen trunk, La Gomera, Canaries. (*ibid*, and cf Kunkel, 1987, 79)

20 ft x at least 6 ft, thought to be 8-900 years old, fossilized in Madeira, (*H. S. Bull.*, 1986, 3, (17) 6.)

7 m. Greatest height in Grand Canary. (Kunkel, in litt., 1975)

4 m. Greatest height in S. France. (Hegi, 1927, 5, (3), 1707) and Spain. c. Lopez Gonzelez, 1982, 533)

25 ft. Rohais nursery, Guernsey. (*Gardening World*, 18th October 1890)

18 ft at West Clandon, 1980.

16 ft. against a wall at Edinburgh, 1836. (Loudon 1, 1838, 1087)

15 ft x 52 ins at the base of Miss Waldhen's, Willans, Mount Hawke, Cornwall, 1983.

Stems 34 cm across, 34 years old in Pyrenees. (Hegi 5, (3), 1707, quoting Kanngiesser).

1,600 m, in Pyrenees. (Lopez Gonzalez, 1982, 533)

4,260 m on Ras Bouahite, Semier, Abyssinia. (Pichi Sermollu et al, *Webbia*, 1952, ix. (1))

and many similar records.

E. arborea 'Alpina'

17 ft x 33½ ins at Wisley, 1979.

19 ins at Great Comp, 1980. Plants c. 30 years old.

E. Australis

17 ft long x 6 ins at Bracken Hill, 1981. ('Mr. Robert')

10 ft. against a wall at Edinburgh, 1836. (Loudon, I, 1838 p. 108700

12 ft 3 ins long x 10½ ins at Wisley, 1979. ('Riverslea')

to 3,500 m (Hansen, 1960, 33)

E. bocquetii

1,750 m, W. Taurus, Turkey. (*Fl. Turkey*, 6, 1978, 97)

E. canaliculata

16 ft at Ludgvan Rectory, Cornwall between the wars.
(Hunkin, 1942)

x 11¼ ins at base. Wisley, 1985. (P. G. Turpin)

E. carnea

x 8.8 cm (2.8 cm diameter). (Kanngiesser, 520)

x 5.0 cm (1.6 cm diameter), 33 years old near Garmisch, Bavaria at 750m. (K. von Leiningen, *Ber. Bay. Bot Ges.*, 1909/10, XII, 106) 40 years old. (*H.S.Y.B.*, 1971, 4)

2,650 m in Grisons. (Hegi V (3), 1702)

E. ciliaris

90 ins near Penryn. (Curnow, 1877)

6 ft. at Soussons Down, Devon, 1973.

to 1,000 m in N. Africa. (Hansen, 1960, 45)

E. cinerea

3 ft 6 ins at Champs Hill, Sussex, 1985

2 ft 6 ins sprawl ('Rock Ruth'), Bracken Hill, 1988.

1,240 m (4,000 ft), Invernesshire. (*Altitudinal records of Br. Plants*)

1,550 m. (Hegi V, (3), 1711)

THE HEATHER SOCIETY

E. x darleyensis

3 ft 6 ins after 24 years ('Arthur Johnson'), Bracken Hill, 1988.

x 12 cm (3.8 cm diameter) after 17 years ('Silberschmelze'), Otters' Court, 1988.

E. erigena

10 ft at Syon, 1838 (E. T. Cook, 1908)

8 ft at Samares Manor, Jersey, 1977

('Superba') stems 12 ft 10 ins long x 6 ins after c. 35 years, Bracken Hill, 1985. (Photo in *The Englishman's Garden*, 1982, 102)

760 m, near Contra. (BM)

1,000 m. (Hansen, 1960, 15, 185)

185 m in Co. Galway. (Not 1,000 ft. as in *Comital Flora*)

E. lusitanica

12 ft at Lytchett Heath, 1983. (cf E. T. Cook, 1908: Comber, *Gardeners Chronicle*, 18th May, 1933, 187)

11 ft 9 ins long x 6½ ins at Bracken Hill after c. 25 years, 1985.

11 ft at Nymans, 1979.

x 22 ins at Rowans Heather Nursery, 1980. (P. G. Turpin)

1,600 m in Serra de Estrela. (Hansen, 1960, 37)

E. mackaiana

3 ft. in Skeltern (*Irish Nat. J.*, 1896, Vol.5, p.292, and in Spain). 600 ft. in Co. Galway, (*Comital Flora* 1932, 189) 1680m above Loredorge, Spain (*Bio. Flora*, 1955, Vol.48, p.323)

E. maderensis

x 4½ ins, at 6,000 ft, Pico Arriero, Madeira, 1974.

E. manipuliflora

1m. (*Fl. Cyprus*, II, 1985, 1061)

1,530m, Kuslici Da. *Fl. Turkey*, 6, 1978, 96)

E. multiflora

10 ft. in Balearics. (DC, *fl. fr.*, 6, 1815, 430, No. 2806)

x c. 4 ins., Dr. V. Gray's, 1979.

900m in Spain. (Lopez Gonzalez, 1988, 535)

E. scoparia ssp *scoparia*

4 m x 18 cm at Biscarrosse, 1982.

9 ft. near London (E. T. Cook, 1908)

1,600 m in Spain. (Lopez Gonzalez, 1988, 534)

 ssp *azorica*25 ft x 11 - 12 cm diameter; a few must have reached 30 - 35
ft. (Guppy, 1913p. 395)6 ft. 6 ins. x 9.4 ins. (3 ins. diameter) in R. Crow's wood collection,
St. Neot, Cornwall

6 ft. 6 ins x 8 ins, Bracken Hill, 1988

2,000 m. on Pico. (Sjogren, 1973, 257)

 ssp *platycodon*

x 25.1 ins (8 ins. diameter), from Madeira, 20th April 1979.

(R. Crow's collection)

x 20 ins., Madeira, 1978.

E. sicula

x 2.3 ins, Wisley, 1979

1,100m (3,600 ft), between Billaas and Afka, Lebanon,
1880; the type specimen of ssp *libanotica*. (P. F. Steven in
Fl. Turkey, 6, 1978, 97)*E. terminalis*

9 ft x 9½ ins, Corsica, 1988.

8 ft. 9 ins. long x 9½ins., Bracken Hill, 1985, after c. 35
years.

x 11 ins, Nymans, 1979.

3,500m in Granada. (Hansen, 1960, 47) - but Lopez
Gonzalez (1982, 539) gives only 1,700 m.*E. tetralix*

2,200 m (7,150 ft) in S. France. (Hegi V (3), 1702)

720 m (c. 2,500 ft) in the Cairngorms. (*Alt. Records of
Br. Plants*)*E. umbellata*

1,000 m in Africa. (Hansen, 1960, 27)

E. vagans.

6 ft. at Nymans, 1985

7 ft. 8 ins. stems, prostrate, after c. 30 years at Bracken
Hill

THE HEATHER SOCIETY

1,500 m in Spain. (Hansen, 1960, 25)

'Mrs. D. F. Maxwell' aged at least 52 years at Bracken Hill, 1988.

E. x veitchii

12 ft., trunks 3 - 4 ft. in girth, Kenock, 1980. (P. G. Turpin)

'Gold Tips' c. 13 ft. at Windsor.

11 ft. 6 ins. x 1 ft. at Bracken Hill, 1988. (Unnamed hardy clone)

x 34 ins. at La Chene, Guernsey, 1980.

Geographical Names for Southern African Ericas

David McClintock, Platt, Kent

Here is the final list of names used for Ericas native to southern Africa, and for hybrids for these produced elsewhere.

I am grateful to Ted Oliver of Kirstenbosch for the comments he made on my draft.

aberdarica. Aberdare mountains.

africana. Africa.

(*asiatica*. Asia - but the plant is a *Cassiope*)

aghillana. Cape Aghulas, Cape Province.

austronyassana. South Nyassaland (Malawi)

barbertona. Barberton, East Transvaal.

barrydalensis. Barrydale, southern Cape Province.

blesbergensis. Blesberg, Zwartberg range, Cape Province.

borbonica. Reunion.

bothwelliana. Bothwell Castle, near Hamilton, Scotland.

butaguensis. Butagu valley, Ruwenzori.

caledonica. Caledon, Cape Province.

capensis. Cape Peninsula, usually.

caroliniana. (Bentham, 1838)

cederbergensis. Cedarberg, Clanwilliam, Cape Province.

constantia. Constantia, Cape Province.

x devoniana. (W. H. Story, Isleworth, pre-1855).

dracomontana/draconis. Drakenstein Peak, Stellenbosch, Cape Province.

drakensbergensis. Drakensberg range, Natal and Transvaal.

elgonensis. Mt. Elgon, Kenya.

elimensis. Elim Mission station, Bredersdorp, Cape Province.

exoniensis. Exeter, England, home town of Lucombe and Pince.

galgebergensis. Galgeberg, Riviersonderende Mountains, Cape Province.

gallorum. Fransch Hoek, Cape Province.

gazensis. Gazaland, eastern district of Zimbabwe.

georgica. George, Cape Province.

'Hanover', (*gracilis*) North German city.

humansdorpensis. Humandsdorp, west of Port Elizabeth.

itombwensis. Itombwe, Piste de Munanira a Masanga, Congo.

'Weisse Jura', (*gracilis*). Mountain range of France and Switzerland.

keeromsbergensis. Keeromsberg, Worcester, Cape Province.

keniensis. Mt. Kenya.

kingaensis. Kinga mountains, Tanzania.

kougabergensis. Kougaberg, Cape Province.

THE HEATHER SOCIETY

langebergensis. Langeberg Range, Cape Province.

lowyrensis. Sir Lowry's Pass, Somerset West, Cape Province.

maidstoniana/maidstoniensis. Maidstone, Kent (not north of Durban).

mauritanica. Mauritania, NW Africa. (A slip by Linnaeus for the Cape).

milanjiana. Milanji Range, Malawi.

missionis. St. Augustin's Mission between the rivers Inxu and Isitsa, Drakenberg Mountains.

mitchelliensis. Mitchell's Peak, Mitchell's Pass, near Ceres, Cape Province.

natalensis/natalita. Natal.

'Niederrhein' (*gracilis*). Lower Rhine, Germany.

nigrimontana. Zwartberg, Caledon, Cape Province.

ostiaria. (Ostium - a door). Seven Weeks Poort. (Poort - a corridor).

pillarkopensis. Pillarkop, Rivieronderende Mountains, Caledon, Cape Province.

picketbergensis. Piquetberg, Cape Province.

purgatoriensis. Purgatory, Fransch Hoek, Cape Province.

reenensis. Reenens Pass, Harrismith District, Orange Free State.

rhodesiaca. Rhodesia.

rugegensis. Rugege Forest, Ruwenzori, Ruanda.

ruwenzoriensis. Ruwenzori Mountains, Uganda.

'Sachsen', (*gracilis*). Saxony, German State.

toringbergensis. Toringberg, north of Ladysmith, Cape Province.

tradouwensis. Tradouw Pass, Swellendam, Cape Province.

'Triomphe de Vincennes'. Suburb of Paris.

turris-babylonica. Babylon's Tower Mountain, Caledon,
Cape Province.

vallis-aranearum. Spinnekopsnes Kloof, Kogelberg (the
Valley of Spiders' Nests).

vallis-gratiae. Genadenal (Valley of Grace).

westphalingia/westphalingii. (By 1834).

zebreensis. Zebra, north of George, Cape Province.

zitzikammensis. Zitzikamm Mountains, between Knysna
and Humansdorp.

zwartbergensis. Zwartberg mountain range, Cape
Province.

Additions to South African Personal Names (1987 Year
Book).

bluknetii. A name attributed to Bergius, and not apparently
a corruption of *pluknetii*. Paquet, 1944, p. 104.

juliana. (Regel, p. 121. Paquet, p. 127)-

Personal and Geographical Names for Hardy Heathers — 7th Supplement

David McClintock, Platt, Kent.

The sixth supplement appeared in the 1987 Year Book
pp. 61 - 64.

Personal Names

'Alice Anne' (*cinerea*). Grand-daughter of K. Davis, 1988.

'Anthony Wain' (*Calluna*). Employee, when young, at Goscote
Nursery.

'Catherine' (*carnea*). Wife of Mr. Kolster of Boskoop.c. 1987.

'Colette' (*Calluna*). Daughter of J. G. Flecken, Holland.

THE HEATHER SOCIETY

- 'Don Richards' (*manipuliflora*) D. Richards of Eskdale, Cumbria, finder in Corfu in early 1970's.
- 'Frederick's Orange' (*Calluna*).? error for 'Terrick's Orange' or 'Prostrate Orange'.
- 'John Pook' (*carnea*) Nursery foreman at Goscote Nursery, Leicester.
- 'Lily' (*cinerea*). Second name of second wife of D. Richards.
- 'Little John' (*Calluna*). Father (Johan) of J.G. Flecken - the plant is a dwarf.
- 'Mrs. E. Wilson' (*Calluna*). Widow of Albert Wilson of Burnt Oak, Victoria BC.
- 'Martin' (*carnea*). Son of Mr. Kolster of Boskoop.
- 'Nigel Anderson' (*Calluna*). Our member, of Landford, Salisbury.
- 'Nico' (*Calluna*). Grandchild of Bardt of Bendingbostel, north Germany.
- 'Parkeri' (*Erica*). Fred Parker of New Plymouth, New Zealand.
- 'Randall's Crimson' (*Calluna*). Mrs. June Randall, Dunchideock, Devon.
- 'Robert Jan' (*carnea*). Son of Mr. Kolster of Boskoop.
- 'Scholje's Giant' (*Calluna*). Dietrich Scholjagerdes of Bad Zwischenahn, north western Germany.
- 'Scholje's Heidebrand' (*Calluna*). As above.
- 'Scholje's Superstar' (*Calluna*). Karl-Keinz Schurig of Barmstedt, north Germany.
- 'Valerie Griffiths' (*manipuliflora* x *vagans*). Wife of Dr. John Griffiths of Garforth, Leeds.

Geographical Names.

- 'Athole Gold' (*Calluna*). Area of central Perthshire.
- 'Corfu' (*manipuliflora*). Where found by D. Richards in early 1970's.
- 'Hayachine' (*Andromeda*). Mountain of north Honshu.
- 'Kirigamine' (*Andromeda*). Mountain west of Tokoy.
- 'Muirend' (*Calluna*). Muirend Farm, Comrie, where found.
- 'Netherfield Orange' (*Calluna*). (From Corvisal Nursery, 1986).
- 'Nikko' (*Andromeda*). National Park in central Honshu.

Ameliorations.

'Chelsea Time' is *E. lusitanica* not *E. arborea*.

'Corbett's Red' (*Calluna*). Bob Corbett of Corbett's Nursery, British Columbia.

'Corbett's White' (*Calluna*). As above.

'Myretoun Ruby' (*carnea*). Myretoun, near Blairlogie, which is in turn near Stirling.

Cultivars Registered During 1988

The Registrar

58. *Erica carnea* 'John Pook'. A seedling first observed in 1975 at Syston, Leics. and put on sale by Goscote Nurseries in 1983. It is distinctive in flowers, which are white until $\frac{2}{3}$ open, then pink (Hii), producing a bicolour effect. Registered by the finder, D. Cox of Goscote.
59. *Calluna vulgaris* 'Anthony Wain'. A very hardy seedling first observed in September 1979 at Goscote Nurseries, Cossington, Leics. and on sale from them in 1983. It is of medium height with spreading branches, which are recurved when young, with magenta rose (H.13) flowers in September and October. Registered by the finder, D. Cox of Goscote.
60. *Calluna vulgaris* 'Golden Fleece'. A 1985 seedling at Forest Edge Nurseries, Wimborne, Dorset. Of a compact bun-shape, stems with a curling habit, flowers lilac, scarce. Registered by the finder, D. Edge of Forest Edge.
61. *Calluna vulgaris* 'Grey Seedling'. A very floriferous grey-leaved seedling at Bracken Hill, Platt, Kent about 1981, distinguished by its great vigour with thick stems and branches and wide bushy growth, soon attaining 2ft. Registered by the finder, D. McClintock.
62. *Calluna vulgaris* 'Kerstin'. A strong-growing seedling from sown seed in 1983. It has deep lilac-grey foliage, colourfully tipped pale yellow and red in spring, and mauve flower H2. It came from the garden of Mrs. Johansson at Vargön, Sweden, who registered it.

63. *Calluna vulgaris* 'Sesam'. A floriferous seedling from sown seed germinated in 1963. Its foliage varies from yellowish to orange and rusty red; flowers lilac pink H11 in narrow erect racemes with up to 8 deeply coloured bracts, although an early flowerer. Registered by the finder, Mrs. Johansson.
64. *Erica manipuliflora* x *E. vagans* 'Valerie Griffiths'. A deliberate hybrid with 'Valerie Proudley' as the pollen parent, made in 1983 by Dr. J. Griffiths of Leeds and named after his wife. It is a tall bushy plant with yellow foliage going golden in summer, and 5 - 10cm racemes of pale pink flowers, hardy in Yorkshire. Registered by Dr. Griffiths of Garforth, Leeds.
65. *Calluna vulgaris* 'Randall's Crimson'. A hardy spreading seedling at Dunchideock, Devon in 1981 with dense crimson flowers, rather darker than 'Darkness' and of a similar height. Registered by Mrs. Randall of Dunchideock.
66. *Erica manipuliflora* 'Don Richards'. A hardy dense erect seedling found by Mr. Richards in the early 1970's in Corfu, reaching 40cm and extremely floriferous with Shell Pink, H8, flowers. Registered by A. W. Jones of West Camel.
67. *Erica manipuliflora* 'Corfu'. A very hardy open erect seedling found by D. Richards in the early 1970's in Corfu, with somewhat interrupted inflorescences of dark Lilac Pink, H11, flowers. Registered by A. W. Jones of West Camel.

New Acquisitions

J. Platt, Ulnes Walton, Lancashire

(Over the years, Jack Platt must surely have grown more new cultivars than most of us. Despite the seemingly undiminished flow of introductions, one is still forced to wonder at his ability to find them so consistently. As ever, I am grateful to General Turpin and David McClintock for providing additional information on the plants that Jack has described this year.

Ed.)

Calluna vulgaris**'Anthony Wain'**

Sept.-Oct.

This plant arose as a seedling which was first noticed by D. Cox on Goscole Nurseries, Leicestershire, in 1979. It was named after a (former) member of the nursery staff, and first offered for sale in 1983. The flowers are H13 crimson, and are carried on arching stems with dark green foliage. It has a neat habit and appears to be slow growing. The name was registered in 1988. (p. 65)

'Contorted'

15 cm Aug. - Sept.

Mr. R. G. Rimmer of Hinton House Nursery, Lydiate, Merseyside found this plant on a hillside of Porth Wen, Anglesey in September 1984. Its habit is very dwarf and spreading, and it tends to produce twisted shoots which keep it close to the ground. The foliage is bright green, and spreads to a width of 30 to 40 cm. The finder describes the flowers as being of "the normal wild *Calluna* colour, purple" (H10).

'Gerda'

July - Sept.

This plant occurred as a seedling in the Chatelains' garden at Orpington, Kent in 1984. It was named after Mrs. Chatelain. It has a prostrate habit and a spread of 40 cm. It is similar to *C. v. 'Golden Carpet'*, but more bronze, especially in winter. Mr. Chatelain describes it as a "shy bloomer, the flower being of the usual *Calluna* shade which I think is H2" (Mauve).

It was registered in 1986 (*Year Book*, 1987, p. 61 and 62).

'Gold Hamilton'

A sport found c. 1987 on 'J.H. Hamilton' which has gold foliage in the spring and early summer, turning green-gold in autumn. It has retained the compact habit and double pink flowers of its parent. It was included in the 1988 catalogue of Plaxtol Nurseries.

This may be the same sport as 'Schurig's Goldstern' which was found in Germany before 1985.

'Grouse'

This is one of five foliage plants named after game birds introduced by Bud Lyle of Alloa. It has a compact bushy habit, and the foliage has tints of orange, bronze and red.

THE HEATHER SOCIETY

Muirend'

The flowers of this plant are H3 lavender. The foliage is yellow in the summer and darkens to orange-red as the weather becomes colder. It is semi-prostrate but the stems are more erect than those of 'Ronas Hill'. The original plant was found on Muirend Farm, Comrie and it was introduced by Miss Thom of Highland Heathers also in Comrie, Perthshire.

'Orange and Gold'

As the name suggests, the foliage of this cultivar is orange and gold. It has a vigorous curling growth, and appears to be faster than 'Prostrate Orange'. The flowers are H2 mauve. It was introduced by Clive Benson in 1988.

'Punch's Dessert'

This was found as a sport on 'Firefly' at the nursery of Highland Heathers at Achahoish, Lochgilphead. It has gold foliage in summer, which fades to yellow-green later in the year. The habit of growth is narrow and erect.

'Quail'

Another of Bud Lyle's foliage cultivars named after game birds, this one has distinct lime-green leaves, which sometimes have a hint of pink. The habit is erect, and more open than 'Grouse'.

'Snipe'

This plant has orange foliage which fuses into bronze. The habit is erect, and it appears to be fast growing. It is yet another of Bud Lyle's cultivars named after game birds.

Erica carnea

'Allison'

The foliage is dark green. It is a vigorous plant with long racemes and an open habit. It was listed by Plaxtol Nurseries in 1988, and is named after a helper at the nursery.

'Lake Garda'

40 cm. Jan. - March

The distinct pale pink (H8) flowers are borne on rather erect stems which prevent them from being splashed with soil in heavy rain. The foliage is mid green. This first class plant was

found by David McClintock above Lake Garda in March 1977, and was registered in 1984. (*Year Book*, 1985, p. 67).

'Porter's Red'

20 cm. Dec. - March

This cultivar was re-introduced from America in 1983. Some say it is identical to 'Myretoun Ruby'. However, at Ulnes Walton it blooms earlier and is lower growing than that cultivar. The flowers open a deep pink-red (H14). (*Year Book*, 1984, p. 34).

Erica cinerea

'Marina'

Aug. - Oct.

A low growing plant with a neat broad habit, dark green foliage and white flowers. It is more vigorous than 'Godrevy'. It was found by J. G. Flecker of Kerkrade near the sea in Brittany in 1980, and is named after his daughter. (*Ericultura*, 60, 19. *Year Book*, 1986, p. 40)

'Rose Beauty'

July - Sept.

A very free flowering plant on which the rose-pink flowers blend well with the dark green foliage. It arose as a sport on 'Purple Beauty' found by Bill Bretherton of Riverbank Nurseries, Tarleton, nr. Preston.

'Stephen Leitch'

This was found as a sport of 'C. D. Eason' at Oliver and Hunter's during the 1980's. The new growth is bright pink, and darkens to orange, which lasts well into the summer. The sparse flowers are H14, magenta and clearer than those of 'Glencairn'. It was named in honour of Mr. Leitch, a Doncaster surgeon and member of the Society, for his 60th birthday. (*Year Book*, 1987, p. 62)

Erica tetralix

'Swedish Yellow'

A wild sport found on Torre Mosse, near Vänersborg in Sweden in 1983, it has green-yellow foliage in summer, turning clear yellow in autumn. It has an erect habit. It was registered in 1986. (*Year Book*, 1987, p. 61 and 63).

THE HEATHER SOCIETY

Erica vagans

'Chittenden'

40 cm.

This name was known by 1934, but it was thought that plants had not been available since the war. Several years ago Mr. R. G. Rimmer of Hinton House Nursery, Lydiate, Merseyside obtained a few cuttings from Liverpool Recreation and Open Spaces Department, and is now offering this cultivar. It has rose-pink flowers and dark green foliage. It seems to be slow-growing. (Year Book, 1971, p. 27 The Gardener's Book of Heathers, 1985, p. 158).

'Lyonesse Sport'

The foliage of this sport is gold in spring and summer, and becomes yellow-green in winter. The flowers have retained the white colour of the parent. It is more vigorous than 'Yellow John'.

Recent Writings on Heathers, 1988

Anon. "Spring Flowers - Heathers", p.10; "Successful propagation - Heathers", p. 18, *Gardening from Which*, Feb. 1988.

Anon. "Heidesoorten", *Groei & Bloei*, Mar. 1988, p. 46.

Pruning.

Anon. "Home grown nursery", *Sevenoaks Chronicle*, 11th March 1988, p. 15.

Mrs. Tessa Forbes's nursery at Plaxtol, Kent. "1,000 varieties of heathers to choose from".

Anon. "Whisky distillers support heathers", *Garden Answers*, April 1988, p. 30.

Bell's sponsorship.

Anon. "Any ideas for heaths on lime?" *Garden Answers*, 1988. Vol. 7, No. 6, p. 21. O.K.

Anon. "Bells funds yearly heather study". *Horticultural Week*, 1988, Vol. 203, No. 23, p. 3

Bell's heather scholarship.

Anon. *Gardening from Which?* Guide to Successful propagation 1988. Heaths, techniques. p. 52.

Anon. "Heather under the weather", *New Scientist*, 19th Nov. 1988, p. 19. "Heather plants are at greater risk of damage from acid rain

than scientists first thought".

Anon. "Winter heaths". *Gardening from Which*, Nov. 1988, p. 382.
Brief sound advice.

Anon. "The PG Good Plant Guide. *Erica carnea* 'Springwood White'", *Popular Gardening*, Dec. 1988, p. 32.
O.K., plus a picture.

Anon. "Acid Rain stunts heather", *Horticultural Week*, 16th Dec. 1988, p. 8.

The views of Dr. M. Cresser of Aberdeen University.

Abuarhub, S. M. and Read, D. J., "The biology of the mycorrhiza of the Ericaceae XI."

The distribution of nitrogen in soil of a typical upland Callunetum with special reference to the "free" amino acids", *New Phytologist*, 1988, Vol. 108, No.4, pp 425 - 432.

The largest quantity is found from September to November.

Abuarhub, S.M. and Read, D.J. "ditto XII Quantitive analysis of "free" amino acids in relation to time and depth in the soil profile" *ibid* 1988, pp 433 - 441. 13 amino acids occurred.

Auriol Batten, *Flowers of Southern Africa*, 1988, pp 158 -161.

Erica bauera. pink and white with the whole plant sketched in a black and white, the only heather in this sumptuous production.

Beckett, Elizabeth, *Wild Flowers of Majorca, Minorca and Ibiza*, Balkema, Rotterdam.

221 pages, with keys to genera and ingenious coloured keys to the species.

Bonduel, P., "Paysages de Bruyère. Plante Vedette", *Mon Jardin et ma Maison*, Jan. 1988, pp 60 - 65.

A good account, with good pictures.

Brondegaard, V. J., "Hvorfor hedder den dat?", *Rosenkilder op Baggen*, 1987, p. 87.

Derivation of "Ling".

Byfield, A., "Dorset Heath Reprieved", *Plant Press*, 1988, 5, p. 2.
Permission refused for a new road across Canford Heath, Dorset.

Clarke, D. L., *Trees and Shrubs Hardy, in the British Isles*, Supplement, 1988.

Andromeda pp 84 - 85; *Calluna* pp 129 - 130 (21 cvs listed); *Erica* pp 224 - 227.

Cox, D., "Create a heather hot spot", *Garden News*, 11th March 1988, p. 17.

E. x darleyensis.

THE HEATHER SOCIETY

- Cox, D., "Dabble in Daboecia", *Garden News*, 23rd July 1988, p. 15. A good account.
- Cox, D., "Create a winter wonderland with heathers", *Garden News*, 17th Dec. 1988, pp 12 - 13.
Normal pot boiler, with a photograph of "Ada S. Collins".
- Davies G. H., "Heathland Hazards", *Country Life*, 24th Nov. 1988, pp 78 - 79.
The encroachment on to the heathlands of Dorset, where Dorset Heath is "unique to the country".
- De Vesco, G., Fornaris, G. and Montecchini, F., "La Presenza di *E. cinerea* L. species atlantica sul territorio piemontese", Source to be traced.
E. cinerea in a new locality in Piedmont. It was originally collected as *E. carnea*.
- Diez, M. J. and Pastor Conesa, J. L., (in) *Atlas Polinico de Andalusia occidentalis*, ed Valdes, B. et al, 1987.
pp 161 - 167. Description and SEM photomicrographs of pollen of *Calluna*, *Erica andevalensis*, *E. arborea*, *E. australis*, *E. ciliaris*, *E. erigena*, *E. lusitanica*, *E. scoparia*, *E. terminalis* and *E. umbellata*. Full references, but no mention of Dr Fraga Vila!
- Dupies, G., *Fleurs du parc National des Pyrenees*. (2 vols). 1987.
p. 82. *Calluna* (richly coloured) and *Erica vagans* only, but good pictures and text.
- Evans, S., "Conservation in Action. Heather.", *National Trust, Wessex*, 1988.
40 acres of poor quality farmland near Corfe Castle, being restored to heather.
- Foss, P. J. and Doyle, G. J., "Why has *Erica erigena* (the Irish Heather) such a markedly disjunct European distribution?", *Plants Today*, 1988, Vol. 1, No. 5, pp 161 - 167.
Did it get to Ireland in the middle ages in litter?
- Garcia Guardia, Gabriel, *Flora sylvestris de Andalucia*, 1988
p. 54. Distribution of *Erica umbellata*; p. 222 *Calluna* with a photograph of it faded; nothing else on heathers
- Gimingham, C., "A reappraisal of cyclical processes in *Calluna* heath", *Vegetatio*, 1988, Vol. 77, (1 - 3), pp 61 - 64.
Variability in restoring cover after gaps appear.
- Gloaguen, J. C., "On the water requirements of four heathers", *Vegetatio*, 1987, Vol. 70, pp 29 - 83.
What would one expect, about *Calluna*, *Erica ciliaris*, *E. cinerea* and *E. tetralix*.
- Gomez Campo, C., "Libro rojo de especies vegetales en amenazadas", *de Espana*, 1987, pp 93 - 94.

Erica andevalensis in danger, in case its copper-polluted habitat gets cleaned up!

Grabherr, G. and Polatschek, A., *Lebensraume und Flora Vorarlbergs*, 1986, 263 pages.
Could be useful.

Grime, P. J., Hodgson, J. G. and Hunt, R., *Comparative Plant Ecology*, Unwin Hyman, 1988.

pp 144 - 145 *Calluna vulgaris*; pp 260 - 261 *Erica cinerea*.

Admirable detailed accounts of habitat requirements of these species.

Haapasaari, M., "The oligotrophic heath vegetation of montane Fennoscandia", *Acta bot. fennica*, 1988, Vol. 135, pp 1 - 29

Fascinating, but *Calluna* only just comes in: *Phyllodoce caerulea* much more.

Hester, Alison J., "Successional vegetation change. The effect of shading on *Calluna vulgaris*". *Trans. Bot. Soc. Ed.*, 1987, Vol. 45, No. 2, pp 121 - 126.

Shading may be a major factor leading to the death of *Calluna* beneath developing birches".

Heyter, S., "Room for Growth", *Horticultural Week*, 1988, Vol. 204, No. 21, pp 22 - 25.

The amazing recent development of good prospects for nurseries in Argyll, one of which at least grows more heathers every year.

Hickey, M. and King, C., *100 Families of Flowering Plants*, 2nd Edn, 1988.

pp 164 - 167. "*E. herbacea* (syn *E. carnea*)" with many enlarged and detailed drawings, well annotated.

Johansson, B., "Latt att bli foralskad i ljung" (Easy to fall in love with Heathers), *Trädgårdsamatörer i 50 ar*, 1988, pp 99 - 102.
An excellent illustrated summary.

Johansson, B., "Oren Fra Fro", *ibid.*, 1988, No. 5, pp 119 - 120.
Wise words on *Calluna* with fine photographs of 'Kerstin' and 'Sesam'.

Kendall, R., "What is attacking my heaths?", *Garden Answers*, May 1988, p. 66.

Two problems, caused by — 1) leatherjackets, 2) crown rot.

Kostalova, D., (Plant diuretics), *Nášé Liecivé Rastliny*, 1987, Vol. 28, No. 4, pp 101 - 104.

Calluna contains cardiac glycosides.

THE HEATHER SOCIETY

- Kristinsson, H., *A Guide to the Flowering Plants and Ferns of Iceland*, Rejkavik, 1987.
365 species beautifully illustrated with distribution maps, text in English.
- Lamb, A. J. and Klaussner, E., "Responses of Fynbos shrubs *Protea repens* and *Erica plukenetii* to low levels of nitrogen and phosphorus applications". *South African Journal of Botany*, 1987, Vol. 54, No. 6, pp 558 -564.
Nitrogen plus phosphorus produced increased height, girth and biomass in the *Eric*.
- Lunardi, C., *Macdonald Encyclopedia of Shrubs and Trees*, 1988.
No. 8 *Calluna vulgaris* with unnamed picture apparently of 'Sellingsloh'.
No. 32. *E. arborea* with picture apparently of 'Alpina', and other species scrappily mentioned.
- Marrs, R. H., "The role of catastrophic death in heathland dynamics", *Vegetatio*, 1986, Vol. 66, pp 109 - 115.
Account of *Calluna* killed by adverse climatic conditions in East Anglia in 1976 - 9.
- Nelson, E. C., "Erica erigena R. Ross and *E. erigena* f. *alba* (Bean) D. McClintock", (in) *An Irish Florilegium II*, 1987, pp 58 - 60 and Pl. 11.
A good account, and a fine painting by Mrs. Walsh.
- Nilsson, C., *Nordisk Fjeldflora*, Bonnialis, (c. £15).
Covers Finland, Norway and Sweden, 272 pp. Omits *Erica cinerea*.
- Oliver, E. G. H., "Studies in the Ericoideae (Ericaceae) VII. The placing of the genus *Philippia* into synonymy under *Erica*; the southern African species", *South African Journal of Botany*, 1987, Vol. 53, No. 6, pp 455 - 458.
15 species dealt with: six new names - *E. altiphila*, *E. dracontana*, *E. esteriana*, *E. exleeana*, *E. madida* and *E. patricola*. cf. p. 50
- Oliver, E. G. H., "Studies in the Ericoideae (Ericaceae) VI. The generic relationship between *Erica* and *Philippia* in southern Africa", *Bothalia*, 1988, Vol. 18, No. 1, pp 1 - 10.
"It is concluded that *Philippia* should be placed in synonymy under *Erica*".
- Oudshoorn, W., "Erica x darleyensis niet langs natuurlijke weg onstaan", *Tuin & Landcschap*, 1987, VOL. 23, p. 19.
Not as accurate as one expected from a former Chairman of Ericutura!

- Pachelis, P. and Klein, M., 'Inhaltsstoffe von *Andromeda polifolia*', *Planta Medica*, 1987, Vol. 53, No. 5, pp 447 - 454.
 "Analaysis of the aerial parts of this species, which is toxic to man, yielded a new flavonid dipentoside (here named polifolioside) in addition to the known compounds.
- Pearce, P., (letter from), "Taking heather cuttings", *Garden News*, 16th July 1988, p. 8.
 The reply recommended a somewhat different routine from David Small's of a week earlier. See below
- Petterssen, E., "Bruk av värbling i vestlandshager. Meldingsblad for Hageselskapet avd". *Nordland*, 1988, No. 2.
 A special four-page leaflet on *Erica carnea*.
- Raabe, E. W., *Atlas der Flora Schweswig-Holsteins und Hamburgs*. Wachholtz-verlag, 1987, p. 304.
Erica tetralix and *Calluna*, very detailed distribution maps, Nos 715 and 716, plus useful text.
- Roberson, F. K., "Ground cover", *Washington Park Arboretum Bulletin*, Vol. 51, No. 2, p. 20.
Andromeda polifolia cvs (and photographs) and *Erica carnea* cvs.
- St George, Julie, "Local heather growers bring little bit of Scotland to Cape".
Cape Cod Times Magazine, 5th Nov. 1988, p. 3.
 K. and B. Erikson's nursery of Rock Spray, North Eastham, and the MacKinnon's at Waquoit, Falmouth, Mass.
- Sjogren, E., *Acores. Flores* 1984.
Daboecia azorica and *Erica azorica* "Green Heather" described in four languages plus colour photographs. that of trees of the latter most impressive.
- Small, D., "Hobby Plants - Winter Heathers", *Amateur Gardening*, 27th Jan 1988, p. 10.
 Good brief pithy summary.
- Small, D., "Heathers. Plants to last", *ibid.*, 20th Feb. 1988, p. 13.
 Planting advice for winter-flowerers, including *E. mediterranea*!
- Small, D., "Height of colour", *ibid.*, 19th March 1988, p. 13.
 Tree heaths, picture of *E. australis*.
- Small, D., "In Shape for summer", *ibid.*, 16th April 1988, p. 36.
 Pruning.
- Small, D., "Daboecias", *ibid.*, 14th May 1988, p. 36.
 A brief summary with an awful picture of a "pink" plant.

THE HEATHER SOCIETY

- Small, D., "Midsummer Belle", *ibid.*, 11th June 1988, p. 9.
On *Erica cinerea*, with a ghastly picture of 'Velvet Night'.
Small, D., "New growth, new plants", *ibid.*, 9th July 1988, p. 32.
Taking cuttings.
Small, D., "Spoilt for choice", *ibid.*, 6th Aug. 1988, p. 12.
14 Callunas selected.
Small, D., "Cornish delights", *ibid.*, 3rd Sept. 1988, p. 12.
E. vagans, with picture of 'Valerie Proudley'.
Small D., "Southern Stars", *ibid.*, 29th Oct. 1988, p. 29.
More on Cape heaths. Picture of *E. baccans*.
Small, D., "Heathers suitable for sinks", *ibid.*, 26th Nov. 1988,
p. 12.
200 words plus a good photograph of 'Ann Sparkes'.
Small, D., "A sporting chance", *ibid.*, 24th Dec. 1988, p. 62.
Sports.
Swindells, P., "All weather heathers", *Garden Answers*, 1988, Vol. 7,
No. 6, pp 15 - 19.
O.K., but a dull set of cvs and *E. x darleyensis* the only
hybrid.
van de Laar, H. J., "*Erica carnea* 'Challenger'", *Dendroflora*, 1988,
Vol. 24, p. 49.
This "marked improvement" on 'Vivellii' awarded a silver medal
in 1987.
van de Venter, H. A., and Esterhuisen, A. D., "The effect of factors
associated with fire on seed germination of *Erica sessiliflora* and
E. hebecalyx", *South African Journal of Botany*, 1988, Vol. 54, No.
3, pp 301 - 311.
The effect differed in these two species. Gases released during
burning may also affect germination.
Weeda, C. J., Westra, R., Ch. and T., *Nederlandse oecologische
Flora*, Hilversum, 1988, pp 33 - 46.
Covers, with beautiful photographs and paintings, *Andromeda*,
Calluna and *Erica ciliaris*, *E. cinerea*, *E. scoparia*, *E. tetralix*.
Whitsey, F., "A Covering Note", *Weekend Telegraph*, 29th Oct.
1988, VI.
Use Bell and Cornish heaths as edging to shrub beds.
Wilkins, M., "Nursery return", *Practical Gardening*, Oct.
1988, p. 9.
Peter Foley's Holden Clough Nursery - but heathers only just
mentioned.
Woodsman, "Gone for good?", *Horticultural Week*, 18th March
1988, p. 50.
"What has happened to the once popular heaths", with a

photograph of *E. tetralix* captioned "Is it still in existence?" - but with next to nothing on heaths in the text.
 (replies on 7th April from Graham Thomas etc).

There have also been useful articles in our contemporaries *Ericultura*, *Der Heidegarten*, *Heather News* and *NE Heather Society Newsletter*. Help in drawing attention to articles on heathers is always welcome.

NURSERYMEN MEMBERS

* Further details in our advertisements. We thank these members for the support which they give to the Year Book.

W Wholesale only

W/R Members who cater for both wholesale and retail trade.
 Nurseries in this group, and the preceding one, welcome enquiries from other traders needing supplies.

MO Nurserymen who are willing to supply plants by "mail order".

All other nurserymen members cater for retail trade only.

ZONE 1. Scotland

/R/ Mr. R. J. BRIEN, Pitcairngreen Heather Farm, Perth, Perthshire.

W/R/ Mr. and Mrs. O. W. CARTWRIGHT, East Lodge, Blairhoyle, Port of Menteith, Stirling, FK0 3LF.

W/R/ Mr. A. Hall, Rosebay Cottage, The Sheep, Mellerstain, Gordon, Berwickshire, TD3 6LO.

/R/ Mr. D. A. LAMBIE, Speyside Heather Centre, West End, Skye of Curr, Durnain Bridge, Inverness-shire.

/R/ Mr. D. C. MACARTHUR, Camore Gardens, Dornoch, Sutherland, IV25 3MX.

/R/MO Mr. C. P. PIPER, Pennyacre Nurseries, Crawley House, Springfield, Fife, KY15 3RU.

W/R/ Mr. G. S. STURROCK, Angus Heathers, 10 Guthrie Street, Letham, Angus, DD0 2PS.

/R/ Mr. P. D. TARRY, Dal-Mhor, 37 Breakish, Isle of Skye, IV42 8QA.

/R/ Mr. D. H. TODD, The Nook, Annfield, Alayth, Perthshire, PH11 8ET.

W// Mr. C. A. WESTON, Whitehills, Newton Stewart, DG0 6GL.

THE HEATHER SOCIETY

/R/ **Mr. D. W. WILLIAMSON**, T. & W. Christie (Forres) Ltd., The Nurseries, Forres, Morayshire, IV36 8EA.

W/W/MO **Mr. J. D. WILSON**, Messrs. Oliver and Hunter, Moniave, Thornhill, Dumfries-shire.

ZONE 2 Ireland

W/R/ **Mr. & Mrs. T. R. R. CARSE**, Scrabo Nurseries, Glen Hill Cottage, 12 Dallyrogan Park, Newtownards, Co. Down, N.Ireland, DT20 4SD.

W/R/ **Mrs. M. HANNA**, 162, Lisnevenagh Road, Antrim, Co. Antrim, N. Ireland, DT41 2JJ.

/R/MO **Mr. P. KANE**, Kane Bros. Nursery, 92 Dundrinne Road, Castlewellan, Co. Down, N.Ireland, DT31 9EX.

W/R/ **Mr. & Mrs. D. KERINS**, Fernhurst Garden Nurseries, Killowen, Kenmare, C. Kerry, Republic of Ireland.

ZONE 3. North East.

W/R/ **Mr. & Mrs. W. CROW**, Starraig Nead, Scots Gap, Morpeth, Northumberland, NC61 4EQ.

/ /MO **Mr. C. GRIFFITHS**, Clifton Garden Nurseries, 1 Office Row, Eldon, Bishop Auckland, Co. Durham, DL14 6XA.

/R/ **Messrs. J. D. & G.M. LISHMAN**, Heighley Gate Garden Centre, Morpeth, Northumberland, NE61 9DA.

/R/ **Mr. P. R. SANDERSON**, The Nurseries, Ulgham Grange, Morpeth, Northumberland, NE61 3AX.

ZONE 4.North West

W/R/ **Mr. & Mrs. J. CURRAN**, Rosedale Nurseries, Butchers Lane, Aughton, Nr. Ormskirk, Lancashire, L09 6SY.

W// **Mr. T. FODEN**, Foden Nurseries, Rowley House, Kermincham, Holmes Chapel, Cheshire, CW4 8DX.

W/R/ **R. HOLMES & SONS**, The Nurseries, Natland, Kendal, Cumbria, LA7 7OC.

W/R/ **Mr. & Mrs. J. KENNEDY**, 3 Gretna How, Gretna, Carlisle, CA6 5OB.

/R/ **Mr. & Mrs. P. LOMAS**, Middle Lane Nurseries, Middle Lane, Duglawton, Congleton, Cheshire, CW12 3PU.

/R/ **Mr. P. J. NAISBY**, Moss House Nurseries, Justicetown, Westlinton, Carlisle, Cumbria CA6 6AN.

W// **Mr. & Mrs. R. G. RIMMER**, Hinton House, Pygons Hill, Lydiate, Nr. Liverpool, Merseyside L31 4JF

ZONE 5. Humberside and Yorkshire.

W/R/ **Mr. C. F. BARNES**, Doretree Nurseries, Grimston, Hull Road, York YP1 5LE

W/R/ **Mr. G. P. VICKERS**, 139 Swinston Hill Road, Dinnington, Sheffield, S. Yorkshire S31 7RY.

ZONE 6. East Midlands

W/R/ **Mr. A. ANNABEL**, Springwood, 22 Church Drive,
Ravenshead, Nottingham NG15 9 FG.

W/R/MO **CRAIL NURSERIES LTD.** Newstead Abbey Park, Linby,
Nottingham NG15 8GD.

/R/ **Mr. & Mrs. L. JONES**, Linden Lodge, Station Road,
Broughton Astley, Leicestershire LE9 6PU.

/R/ **Mr. G. M. SALMON**, Ash Tree Nurseries, 14 Shepherds Way,
Uppingham, Oakham, Leicestershire LE15 9PW.

W// **Mr. & Mrs. J. P. SWAIN**, Pinfold Nursery, Main Street,
Burton Overy, Leicester LE8 0DL

W/R/ **Mr. H. J. TOMLINSON**, Greenwood Gardens, Ollerton
Road, Arnold, Nottingham NG5 8PR

ZONE 7. West Midlands.

W/R/ **Mr. J. L. ALLEN**, Green Beech Nursery, Oxleys Road,
Wishaw, Sutton Coldfield, W. Midlands B76 9PA

/R/ **Mr. G. J. COOKES**, Little Froome, 2 Drayton Lane, Fenny
Drayton, Nuneaton, Warwickshire CV10 6A2.

/R/ **Mrs. B. I. EVANS**, Ridgeway Heather Nursery, Horderley
Farm, Horderley, Craven Arms, Salop SY7 0HP.

W// **Mr. & Mrs. M. EVERETT**, Greenacres Nursery, Bringsty,
Worcester WR6 5TA

W// **Mr. D. KISBY**, Westhaven Nursery & Co. 6 Tythe Barn Close,
Stoke Heath, Bromsgrove, Worcestershire B60 3QP.

/R/ **Mr. & Mrs. A. E. LOVEYS**, 88 Haycroft Drive, St. Leonards
Park, Gloucester GL4 9XX

W/R/ **Mr. & Mrs. R. WARNER**, Barncroft Nurseries, Dunwood
Lane, Longsdon, Stoke-on-Trent, Staffordshire ST9 9QW.

/R/ **Mrs. H. WARREN**, Conifers, 10 Outwoods Street, Burton-on-
Trent, Staffordshire DE14 2PJ

ZONE 8. Wales

W/R/ **Mr. J. D. M. FORD**, Deacons Nurseries, Hilltop, Sunnybank,
Brecon, Powys LD8 7RW.

ZONE 9. Eastern

W/R/ **Mr. & Mrs. D. J. DOSLEY**, D.J.C.C. Heathers, Pandora,
Elsing Road, Lyng, Norwich, Norfolk NR9 5RP

/R/MO **CHRIS BOWERS AND SONS**, Whispering Trees Nursery,
Wimbotsham, Norfolk PE84 8QB

W// **Mr. & Mrs. I. E. COLE**, Gwithian, Chelmsford Road,
Rawreth, Wickford, Essex SS11 8SY.

/R/ **Mr. & Mrs. G. J. DYER**, 86 Goshawk Drive, Chelmsford,
Essex CM2 0XP.

/R/MO **Mr. & Mrs. B. A. GODFREY**, Dridge Nurseries, Dunwich, Nr.
Saxmundham, Suffolk IP17 3DZ.

THE HEATHER SOCIETY

- W/R/MO **Mr. & Mrs. D. F. HIPPERSON**, Norwich Heather & Conifer Ctr, 54a Yarmouth Road, Thorpe, Norwich, Norfolk IP21 4QP.
- W/R/ **Mr. & Mrs. H. B. OAKES**, The Nurseries, Pulham St. Mary, Diss, Norfolk IP21 4QQ.
- W// **Mrs. P. RODWELL**, Upminster Lodge Nurseries, Tomkyns Lane, Upminster, Essex RM14 1TP.
- W/R/MO **Mr. & Mrs. D. J. SMALL**, Denbeigh Heather Nurseries, All Saints Road, Creeting St. Mary, Ipswich, Suffolk IP6 8PJ
- W/R/ **Mr. & Mrs. M. J. STRUTT**, Woodland Nursery, Gardiners Lane, North Crays Hill, Billericay, Essex CM11 2XE.
- /R/ **Mr. & Mrs. C. J. WHITAKER**, 51 Gilmore Way, Great Baddow, Chelmsford, Essex CM2 7AP.
- W/R/ **Mr. & Mrs. S. D. YOUENS**, The Gardens, Holkham Park, Wells-next-the-sea, Norfolk NR23 1AB.

ZONE 10. North Thames

- W/R/ **Mr. S. CHEETHAM**, Askett Nurseries, Flowery Field, Askett, Aylesbury, Buckinghamshire HP17 9LY.

ZONE 11. Southern

- W/R/ **Mr. & Mrs. R. W. S. DIGGS**, Ockham House, Bodiam, Robertsbridge, E. Sussex TN32 5RA.
- /R/ **Mr. & Mrs. J. FRANCIS**, The Nursery, 37 Stone Lane, Worthing, W. Sussex BN13 2BA.
- W/R/MO **Plaxtol Nurseries**, Spoute Cottage, Plaxtol, Sevenoaks, Kent TN15 0QR.
- W/R/ **Mr. H. F. TAIT**, 11 Water Slippe, Hadlow, Tonbridge, Kent TN11 0EP.
- W/R/ **Mr. & Mrs. D. J. THORPE**, Strikers Nursery, Stilland Farm, Plaistow Road, Chiddingfold, Godalming, Surrey GU8 4SX.
- /R/ **Mr. & Mrs. G. A. WALTERS**, 8 Barn Crescent, Newbury, Berkshire RG14 6HD.
- W// **WINDLESHAM COURT NURSERIES**, London Road, (A30), Windlesham, Surrey.

ZONE 12. South West

- W/R/ **Mr. & Mrs. D. CHALK**, Polden Acres, Edington, Bridgwater, Somerset TA7 9HA.
- W// **Mr. & Mrs. D. M. EDGE**, Forest Edge Nursery, Verwood Road, Woodlands, Wimborne, Dorset BH21 6LJ.
- /R/ **FURZEY GARDENS**, Charitable Trust, Minstead, Lyndhurst, Hampshire SO4 7GL.
- /R/ **HEATHERWOOD NURSERIES**, Merley Park Road, Wimborne, Dorset.

- W/R/MO **Mr. D. G. JOHN**, 366 Wallisdown Road, Bournemouth,
Dorset BH11 8PS.
- W/R/MO **Mr. & Mrs. A. W. JONES**, Otters' Court Heathers, West
Camel, Yeovil, Somerset BA22 7QF.
- W// **Mr. & Mrs. R. KOERPER**, Battle House Gardens, Bromham,
Chippenham, Wiltshire SN15 2EX.
- /R/ **NAKED CROSS NURSERIES**, Waterloo Road, Corfe
Mullen, Wimborne, Dorset BH21 3SR.
- /R/ **Mr. & Mrs. D. K. PRICE**, Orchardleigh Nursery, Botley Road,
Bishops Waltham, Hampshire SO3 1DR.
- /R/ **Mr. & Mrs. H. PRINGLE**, 166 Woodlands Road, Ashurst,
Southampton, Hampshire SO4 2AP.
- /R/ **Mr. & Mrs. A. J. SELFE**, Copperfield, Chatter Alley,
Dogmersfield, Basingstoke, Hampshire.
- W// **Mr. & Mrs. F. WHYMARK**, 2 Heath Villas, Hollywater,
Dordon, Hampshire GU35 0AH.

Zone 13. Far West

- W/R/ **BERRYDOWN PRODUCTS LTD.** "Berrydown", Gidleigh,
Nr. Chagford, Newton Abbot, Devon TQ13 8HS.
- W/R/MO **Mr. & Mrs. N. FROGGATT**, Woodland Nursery, Garras,
Helston, Cornwall TR12 6LN.
- W/R/ **Mr. & Mrs. C. IVINS**, Trewnice Nurseries, Trewnice Lane,
St. Issey, Cornwall PL27 7RL.
- W/R/ **Mr. & Mrs. R. A. NOYCE**, Watering Lane Nursery,
Pentewan, St. Austell, Cornwall PL26 6BE.

Zone 145. Overseas

- S/R/ **Mr. & Mrs. J. BYWATER**, 22 Winchester Avenue, Halifax,
Nova Scotia, B3P 2C8 Canada.
- /R/ **Mrs. R. M. KNIGHT**, Heather Acres Inc. 62 Elma-Monte
Road, Elma WA 98541 USA.
- W// **Mr. K. KRAMER**, Edammer Strasse 26, 2905 Edewecht-
Suddorf, West Germany.
- /R/ **Mr. H. WESTERMANN**, D.3045 Bispingen, Baumschulen-
weg 2, West Germany.
- /R/ **Mr. D. WILSON**, 6227 Hopedale Road, Sardis B.C. V2R
1B3 Canada

LOCAL ORGANISERS**ZONE 2. Ireland.**

Mrs. E. CLAVERT, Mimosa, 10 Manse Road, Newtownards, Co.
Down, Northern Ireland BT23 4TP.

THE HEATHER SOCIETY

Mrs. J. M. S. McCOLLUM, The Orchard, Lucan, Co. Dublin,
Ireland.

ZONE 3. North East.

Mrs. D. M. WARNER, "Littlecroft", Ponteland, Newcastle-on-Tyne
NE20 9BQ.

ZONE 4. Merseyside

Mr. R. H. P. PICKERING, 19 Bushby Park, Formby, Liverpool
L37 2EE.

ZONE 5. Yorkshire

Dr. K. C. BARRACLOUGH, 19 Park Avenue, Chapeltown, Shef-
field S30 4WH.

(Hon. Secretary/Treasurer of the Heather Group of the Northern
Horticultural Society, Harlow Carr).

ZONE 6. East Midlands.

Mr. LEIGHTON-JONES, Linden Lodge, Station Road, Broughton
Astley, Leicester.

ZONE 7. West Midlands

Mrs. D. EVERETT, Greenacres Nursery, Bringsty, Worcester
WR6 5TA.

ZONE 10. North Thames

Mr. A. J. STOW, Widmour, Limmer Lane, High Wycombe, Buc-
kinghamshire HP12 4QR.

ZONE 11. Southern

Mr. & Mrs. J. B. VICKERY, "Timberly", Ringley Park Avenue,
Reigate, Surrey, RH2 7DN.

Zone 12, South West

Mr. P. L. JOYNER, 84 Kinross Road, Rushington, Totton,
Southampton, SO4 4BN.

COMMITTEE MEMBERS

FINANCE AND GENERAL PURPOSES

Mr. D. B. OLIVER, 17 Hayclose Crescent, Kendal, Cumbria, LA9 7NT. (chairman).

Mr. D. M. EDGE, Forest Edge Nursery, Verwood Road Woodlands, Wimborne, Dorset, BH21 6LJ.

Mr. P. J. JOYNER, 84 Kinross Road, Rushington, Totton, Southampton SO4 4BN.

Mrs. P. B. LEE, Birches, Kingswood Firs, Grayshott, Hindhead, Surrey GU25 6EX.

Mr. D. J. T. MAYNE, 16, Poplar Avenue, Kirkbymoorside, Yorks, YO6 6ES.

Mr. D. H. E. ROPE, Clouds, 38 Vernon Crescent, Ravenshead, Nottinghamshire NG15 6BL.

Maj.-Gen. P. G. TURPIN, Cottswold, West Clandon, Guildford, Surrey, GU4 7UW.

PUBLICATIONS

Mrs. D. H. JONES, Otters' Court, West Camel, Somerset BA22 7QF (Chairman)

Mr. A. HALL, 18 Albury Avenue, Cheam, Surrey SH2 7JT.

Mr. A.W. JONES, Otters' Court, West Camel, Somerset BA22 7QF.

Mr. P. L. JOYNER, 84 Kinross Road, Rushington, Totton, Southampton SO4 4BN.

Mr. D. B. OLIVER, 17 Hayclose Crescent, Kendal, Cumbria LA9 7NT.

Mr. A. J. STOW, Widmour,Limmer Lane, High Wycombe, Buckinghamshire HP12 4QR.

TECHNICAL

Mr. D. J. SMALL, Denbeigh, All Saints Road, Creeting St. Mary, Ipswich, Suffolk IP6 8PJ (Chairman)

Mr. D. CHALK, Polden Acres Gardens, Edington, Bridgwater, Somerset TA7 7HA.

Mrs. D. EVERETT, Greenacres Nursery, Bringsty, Worcester WR6 5TA.

Mr. A. W. JONES, Otters' Court, West Camel, Somerset BA22 7QF.

THE HEATHER SOCIETY

Mr. T. A. JULIAN, Lee Wood, Reservoir Road, Whaley Bridge,
Derbyshire.

Mr. H. L. NICHOLSON, Farm Cottage, Westcott Road, Dorking,
Surrey RH4 3EB.

Mr. T. L. UNDERHILL, Fairlight, Mill Cross, Rattery, South Brent,
Devon TQ10 9LB.

Mr. G. P. VICKERS, 139 Swinston Hill Road, Dinnington,
Sheffield S31 7RY.

ALTAG

ALUMINIUM LABELS

White, black, grey or brown

Choose from 6 standard T shapes, 2 width of stick labels made to
any length.

Many other styles of display labels made to your requirements.

*Please send 2 first class stamps for samples to
ALTAG*

*19 Friends Avenue, Margate, Kent CT9 3XE
Phone (24 hours) 0843 227744*

Barncroft Nurseries

(R. Warner, S. Warner B.Sc.(Hort) M.I. Hort)

Plants for heather gardens

Our policy is to grow all types of plants which we believe associate well with heathers, and which may be required to provide the complete heather garden — whether it is a single small bed or many acres in extent.

In furtherance of our policy we grow:

CONIFERS — OVER 400 VARIETIES IN VARIOUS SIZES —

FROM Abies to Tsuga

SHRUBS AND TREES — over 300 varieties including extensive range of ericaceous subjects, and of course

HEATHERS, more than 400 varieties selected from the 800 or so varieties of heathers in our garden and stockbeds and which are now available in three sizes: standard in 8cm pots; larger size plants in 12.5cm pots and specimen size plants in 23cm pots.

RETAIL OPENING HOURS: The gardens (which extend to over an acre) and nursery are open every Friday, Saturday and Sunday from 9 a.m. until 7 p.m. (or earlier dusk).

(WHOLESALE AND LANDSCAPE CUSTOMERS

Monday - Thursday please)

Dunwood Lane, Longsdon, Stoke-on-Trent

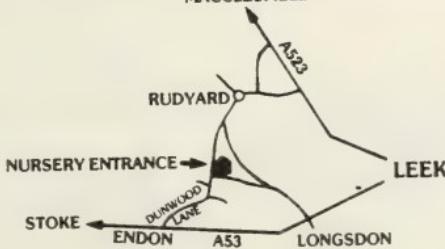
(Off A53, 3 miles west of Leek)

Phone Leek (0538) 384310, 372111

SORRY, STRICTLY NO POSTAL TRADE

Plants are obtainable only by collection from the nursery

MACCLESFIELD



Naked Cross Nurseries

(inc. Maxwell and Beale)

The Heather Specialists

Waterloo Road, Corfe Mullen, Wimborne, Dorset BH21 3SR

Proprietors: P. French, J. Paddon. Also Herbaceous border plants

'WOODLAND NURSERY'

**HEATHERS AND CONIFERS
GOOD SELECTION AVAILABLE
RETAIL AND TRADE**

Gardiners Lane North
Grays Hill, Billericay (ADJ A127)
0268 - 21915

Esex. CM11 2XE



**THE BRITISH HEATHER
GROWERS ASSOCIATION**

BENEFITS THE GROWERS

Regular Meetings
Nursery visits
Up to date Cultural
information
Clonal selection scheme

Group purchasing facilities

BENEFITS THE CUSTOMER

Bed labels
Promotional leaflets
Improved quality and
labelling

Chairman: John Hall, Windlesham Court Nursery 0996 21456

PENNYACRE NURSERIES

Heathers and Dwarf Conifers

Nearly 200 varieties available individually or in collections

Despatched by first class post, S.A.E. for descriptive list to:

PENNYACRE NURSERIES (H) Springfield, Fife,
KY15 5RU

Speyside Heather/Garden Centre

Dulnain Bridge, Inverness-shire, Scotland PH26 3PA

(Betty and Davie Lambie)

where better to view approx. 300 varieties of Heathers than in the heart of the Central Highlands of Scotland? Our Centre is situated in the shadow of The Cairngorm Mountains — a short walk from the River Spey

TEAROOM - open Spring, Summer and Autumn Tel: 047 985 359

**BLUE, GOLD, GREEN, AND VARIEGATED DWARF
AND SLOW GROWING**

QUALITY CONIFERS

Over 100 varieties grown as well as many heathers

H. WARREN

10 Outwoods Street

Burton-on-Trent

Staffordshire

Open daily 9.30 a.m. - 5.30 p.m.

Tel for evening appointments

Tel: 0283-43913

(evenings)

M. G. FRYE HEATHERS

The Willows, Poors Lane North, Daws Heath

Thundersley, Essex SS7 2XF

Plants despatched throughout UK

CATALOGUE FREE (Send stamp)

NURSERY OPEN DAILY 8 A.M. - Dusk except Wednesdays

Telephone: Southend (0702) 558467

RIDGWAY HEATHER NURSERY HORDERLEY FARM HORDERLEY Nr. CRAVEN ARMS (off A489) Shropshire

High quality container grown Heather propagated from our own Heather garden. Excellent range of Dwarf Conifers.

Collections only Closed Mondays

Heather Society Members particularly welcome

Mrs. Brenda Evans
CRAVEN ARMS 2248



PLAXTOL NURSERIES

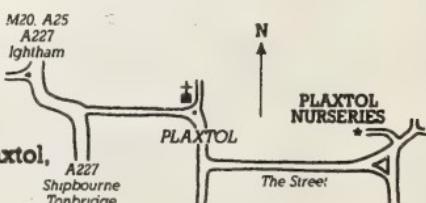
TESSA FORBES
Dip. Hort. Sci.
(Reading)

FOR HARDY PLANTS, HEATHERS
AND DWARF CONIFERS.

We propagate and
grow our own.

OPEN 6 DAYS A WEEK
10am - 5pm Closed Fridays

Plaxtol Nurseries, The Spoute, Plaxtol,
Sevenoaks, Kent TN15 0QR
Plaxtol (0732) 810550



Mail orders welcome. Catalogue 5op

BLAIRHOYLE NURSERY

(on edge of Trossachs)

Blairhoyle, Port of Menteith, Stirling

(on A 873 between Stirling and Aberfoyle)

Telephone: 087 75 669

High quality container grown Heathers at competitive prices. Also small selective varieties of conifers, alpines and shrubs.

View our display beds at your leisure in pleasant surroundings.

Windlesham Court Nursery

**London Road (A30) Windlesham,
Surrey
GU20 6LJ
Ascot (0990) 21456**

WHOLESALE GROWERS OF HEATHERS

**Visits by Heather Society Groups
welcome but by appointment please**

BRIDGE NURSERIES

(Joan and Brian Godfrey)

We specialise in high quality heathers grown in 3½ inch pots. Why not spend a day at the seaside of our beautiful unspoilt coastline, go birdwatching at the famous MINSMERE bird reserve, and then visit our display beds at the same time? We also do mail order in collections of 10, - Summer, Winter, and Mixed, or your own personal selection. Please send s.a.e. for free Catalogue to:

Please send s.a.e. for free Catalogue to:
Bridge Nurseries, Dunwick, Nr. Saxmundham, Suffolk, IP17 3DZ.
Telephone: Westleton (072 873) 270

D & M Everett

Greenacres Nursery, Bringsty, Worcester WR6 5TA
Telephone: Bromyard (0885) 82206

Specialists in Heathers and Dwarf Conifers

Heather Society Members especially welcome, but please telephone in advance to ensure that someone will be available to talk to you.



Otters' Court Heathers

West Camel, Yeovil, Somerset.
Tel: 0935 850285

(½ mile south of A303 trunk road to the south-west)

We specialise in a wide range of lime-tolerant heathers and dwarf conifers and welcome visitors who wish to see these plants established in our own garden.

Please send 2 x 15p in stamps for catalogue or Tel. Marston Magna (0935) 850285



Wholesale Supplier of
High Quality Heathers
to Nurseries and
Garden Centres.



D.M. & D.M.A. EDGE, Woodlands . Wimborne Dorset .
BH21 6LJ Tel: 0202 824387

Clifton Garden Nurseries

Heathers and Dwarf Conifers
Container grown in 1¼" P. 60
Nursery open by appointment only

Tel: 0388 773045

SAE for Mail order price list to Clifton Garden Nurseries, 1
Office Row, Eldon, Bishop Auckland, Co. Durham, DL14
8XA



OPEN DAILY

Watering Lane Nursery
CORNISH NURSERY STOCK
PENTEWAN — ST. AUSTELL —
CORNWALL PL26 6BE

Telephone: (0726) 69695

GROWERS OF A WIDE RANGE OF HEATHERS —
DWARF CONIFERS — AZALEAS —
RHODODENDRONS — SHRUBS etc.

What a shame!
Your Nursery could have had its name
JUST HERE
Seen by all our members
Write for special members rates for
1990 to the Society

Denbeigh Heathiers

for quality rooted cuttings

Try us for the unusual or rare
amongst the 600 cultivars we supply

To find our more, send for our catalogue
12 first class stamps please)to:-

DAVID SMALL
DENBEIGH HEATHER NURSERIES
All Saints road, Creeting St. Mary,
IPSWICH,
Suffolk
IP6 8PJ
Tel: 0449 711220 (after 6 p.m.)

